

COAST SURVEY.

LETTER

FROM

THE SECRETARY OF THE TREASURY,

TRANSMITTING

A report in relation to the Coast Survey.

DECEMBER 8, 1836.

Read, and laid upon the table.

TREASURY DEPARTMENT,

December 7, 1836.

SIR: I have the honor respectfully to report to the House of Representatives, that the business appertaining to the survey of the coast was transferred, by order of the President, on the 26th March last, from the charge of the Navy Department to the Treasury Department.

In consequence of a difference of views existing between the President and the superintendent, (Mr. F. R. Hassler,) in regard to an allowance of arrearages of pay claimed by him, for himself and assistants, as also for an increased rate of compensation for the future, this department was directed to bring the subject to the notice of Congress. Accordingly, a communication was addressed, on the 9th of May last, to the Committee on Commerce of the House of Representatives, inviting their attention to the same. A copy of said communication, with the accompanying papers, together with the reply of the committee, is herewith transmitted, (marked A, numbered from 1 to 9.)

Congress having adjourned without taking any legislative action in the matter, the President did not deem it advisable to allow the claim made by the superintendent for himself and assistants without such action. Consequently, as the House is aware, he has in his annual message invited the attention of Congress to the entire subject of the coast survey, as well as of the weights and measures, including future as well as past compensations, and the general supervision of their further progress.

In compliance with his directions, and the intimation given in his message, I now have the honor to submit copies of all the further correspondence on these points which has taken place since the adjournment of Congress, (B, numbered 1 to 8.) This, with that before specified, includes all the information in the possession of this department concerning both subjects.

Blair & Rives, printers.

I have, also, the honor to transmit a report from Mr. Hassler, showing the progress which has been made, and the present state of the works under his superintendence, relating to the coast survey, and the manufacture of standards of weight and measure, (marked C.)

All which is respectfully submitted.

LEVI WOODBURY,
Secretary of the Treasury.

To the honorable JAMES K. POLK,
Speaker of the House of Representatives.

A 1.

TREASURY DEPARTMENT,

April 13, 1836.

SIR: I have the honor respectfully to submit for the consideration and decision of the President the subject of an application made by Mr. F. R. Hassler, superintendent of the coast survey, for an increase of his own compensation, and also those of the persons employed as assistants, and in other capacities, in the respective branches of that work.

Mr. Hassler proposes that his pay be fixed at \$3,000 per annum, and a similar sum for expenses, to commence with the first day of the present month. He also asks for an allowance for the work on weights and measures, at the rate of fifteen hundred dollars per annum, from the 2d of August, 1832, to the close of last month, from which the sum of five hundred dollars be deducted, which has been already paid him, by direction of the President, upon the joint report of the Secretaries of the Treasury and Navy, and the Fourth Auditor.

Capt. William H. Swift, who acts as disbursing officer, was originally employed at an allowance of two dollars per day, in addition to his pay, as an officer in the corps of topographical engineers. In addition to which, he received $2\frac{1}{2}$ per cent. upon the amount of his disbursements. Exclusive of the latter, his compensation stood as follows:

Army pay, about	-	-	-	-	-	\$1,319
Two dollars per day, say per annum	-	-	-	-	-	730
						<u>\$2,049</u>

Both the per centage and the daily allowance have been discontinued, leaving him at this time nothing more than his army pay, to wit, \$1,319.

Mr. Hassler suggests that these allowances should either be restored to Capt. Swift, or some other made in lieu of them, so as to make it equal to the original rate, and also that the amount so discontinued should be allowed him.

The present annual pay of the gentlemen engaged in the work, who have not been detailed either from the army or navy, is as follows:

James Ferguson, assistant of the 1st class	-	-	-	-	\$2,549
Edmund Blunt do. do.	-	-	-	-	2,549
E. M. Eakin, do. do.	-	-	-	-	2,118 75
Charles Renard, * do. 2d do.	-	-	-	-	1,415
Hugo Dickins, assistant 2d class	-	-	-	-	1,132

* Mr. Renard discharges the same class of duties as Mr. Eakin,

Besides the foregoing, the following officers have been detailed on the land part of the coast survey:

Lieutenant Alexander Mackay, assistant of 1st class, receives the pay of first lieutenant of artillery, say	-	-	\$796
Passed Midshipman John A. Dahlgren, assistant of the 2d class, receives his pay as an officer of the navy, say	-	-	750
Passed Midshipman T. J. Page, assistant 2d class	-	-	750
Passed Midshipman T. A. Jenkins, assistant 2d class	-	-	750

Mr. Hassler urges the justice and propriety of the foregoing officers, who have been selected on account of their merit and competency, to be placed upon the same footing, in regard to compensation, as those discharging a similar class of duty, who are not taken from the army or navy; and, moreover, that they may not lose their right to promotion in those respective services, by reason of their employment in the coast survey.

In regard to the proposition respecting the pay of these officers, it is to be remarked, that although the reasonableness of their claim to be placed on an equality in this respect with the civilians performing precisely similar duties, would appear obvious, yet such allowance seems expressly prohibited by law.

The act "to regulate the pay of the navy of the United States," approved the 3d of March last, contains the following clause, to wit:

"It is hereby expressly declared, that the yearly allowance provided in this act is all the pay, compensation, and allowance, that shall be received, under any circumstances whatever, by any such officer or person, except for travelling expenses when under orders."

A similar provision affecting the officers of the army is contained in the act of the 3d of March last, "making additional appropriations for the Delaware breakwater," &c. which provides, "that no officer of the army shall receive any per cent. or additional pay, extra allowance, or compensation, in any form whatever, on account of the disbursing any public money appropriated by law during the present session for fortifications, execution of surveys, works of internal improvement, building of arsenals, purchase of public supplies of any description, or for any other service or duty whatsoever, unless authorized by law."

Under these circumstances, and connected with the fact that these officers are gentlemen of science and skill, and have acquired by experience much practical knowledge of the business, it might be deemed expedient to apply to Congress to authorize by law the officers of the army and navy employed on the coast survey, to be placed on the same footing, with respect to compensation, as civilians. This suggestion is, therefore, respectfully submitted for the consideration of the President.

Mr. Hassler has not proposed any maximum pay in the cases of Messrs. Ferguson and Blunt. The department, however, is informed that these gentlemen are dissatisfied with their present rate of pay, and, unless it be increased, will probably withdraw from the work. Their talent and skill have been satisfactorily tested by the results of their respective labors, which have been also duly appreciated and acknowledged by the superintendent. Their withdrawal from the work at this time would produce much embarrassment, and have the effect to check or retard its progress; for although others might be employed in their stead, possessing equal science, they would still not possess the practical information upon the details of the work which these gentle-

men have acquired by long experience. It is represented to the department that their present pay is much less than the rate usually allowed by States or corporations to chief engineers on canals or rail-roads, whose duties, though bearing some analogy to those under consideration, still, it is alleged, do not require the same scientific acquirements and minute calculations with a view to nice and exact results, as are indispensably necessary in the work on the coast survey. Chief engineers, it is stated, receive from \$2,500 to \$5,000 per annum from States and incorporated companies.

As Mr. Renard is represented as discharging the same kind of duties as Mr. Eakin, it would appear but reasonable that both should receive the same rate of compensation; and whether it be expedient to raise his pay, or reduce Mr. Eakin's to the same rate as his, is respectfully submitted for the President's decision.

Mr. Hassler suggests that Mr. Wm. Wurdemann, who has been employed temporarily as mechanician to keep the instruments in order, should be employed permanently in that capacity at a salary of \$800 a year, and an allowance for board at \$3 50 per week; and in consequence of the multiplicity of writing incident to the work devolving upon himself, that a clerk be allowed, and recommends Mr. Samuel Hein, upon the same terms as Mr. Wurdemann. He further suggests, that, when found necessary, he be allowed to appoint under assistants, at an annual salary of from \$500 to \$700 each, with an allowance for board.

In regard to Mr. Hassler's own salary, it is to be observed, that it was fixed by the letter of Mr. Secretary McLane, dated the 9th of August, 1832, in the following words, to wit: "You will receive, in full for all your services, a compensation at the rate of \$3,000 per annum, and for all your personal expenses an allowance at the rate of \$1,500 per annum, payable quarterly, to commence on the 2d of August, 1832."

In 1816 his pay was at the same rate, with an allowance for expenses of \$2,000. Mr. H. represents the allowance for expenses to be inadequate, and much less than the amount necessarily incurred in the discharge of his duties.

It is to be remarked, that for the past year an additional allowance of \$500 to cover expenses was granted upon the recommendation contained in the report before adverted to. He has, moreover, been allowed the keeping of the horses and carriage which he has used during the winter, which, if he had not had the use of, he would have been obliged to have paid for such expenses out of his salary. It would appear to be reasonable, if upon the exercise of proper economy his necessary expenses exceed, as represented, the sum allowed for this object, that a sufficient amount to cover them should be granted; which fact, however, it would seem proper ought to be shown by vouchers, indicating the character as well as amount of the several expenses; and if this cannot be done, then the statements and opinions of persons familiar with the actual personal expenses incident to such works should be furnished. The whole allowance, of all kinds, is now \$5,000 a year, equal to that of Chief Justice of the United States; all this is proposed to be continued until the weights and measures are finished.

With respect to Mr. Hassler's claim for an allowance at the rate of \$1,500 a year for his services in the work on weights and measures from August, 1832, to the close of the past month, it is to be observed, that the department has decided, in a similar case, that no retrospective allowances for compensation can be made where the sum was previously fixed for the se

vices performed. The pay heretofore given has been for services and superintendence as to both the survey and the preparation to make, and the actual making of weights and measures; and if now increased, the change must be made to operate only for the future, or to begin with the present year.

On a review of the whole subject, sir, I would submit to your consideration whether it be not advisable—

1. To have the attention of Congress, or the proper committee, invited to the propriety of permitting the officers of the navy employed on shore, and those of army who are engaged in the survey of the coast, to receive such a reasonable addition to their compensation, from the proper appropriation, as their increased exposures, expenses, and labors may render just.

2. That the pay of Messrs. Ferguson and Blunt remain unaltered, till it be more clearly shown that persons of their acquirements and skill in similar employment are receiving higher compensation.

3. That Messrs. Eakin and Renard's compensation may be equalized, but not so as to make both exceed the present amount of both; and that the pay of the assistant be reduced to that of the midshipmen, unless his services are of the importance and character which cannot be commanded without so large a compensation.

4. That the pay proposed for the mechanician, and other assistants when found necessary, seems reasonable; and that for the purpose of employing clerk hire from time to time as needed, to copy journals, calculations, letters, reports, and other public papers connected with the survey, Mr. Hassler be authorized to expend not over \$500 per year, unless it shall hereafter appear that there is work enough of that description to keep one person constantly employed; in which case, one may be engaged at the rate of \$1,000 a year, in full of services, board, &c. Either of these allowances will, in some degree, relieve Mr. Hassler from some of his present labors.

With these remarks, and what have before been submitted in respect to the subject, and especially in respect to Mr. Hassler's own compensation, the case is presented to the President for his final opinion.

Mr. Hassler's letter is enclosed.

Respectfully, yours,

LEVI WOODBURY,

Secretary of the Treasury.

THE PRESIDENT OF THE UNITED STATES.

A 2.

WASHINGTON CITY,

April 30, 1836.

MOST HONORED SIR: The communication of your report upon my letter of the 27th March, made to me yesterday, upon your direction, by Mr. Rodman, obliges me, unfortunately, to address to you this letter, while I hoped I would have only to thank you for the full granting of all which I had stated in that letter; because I thought that the explanations contained in the numerous documents printed, and as yet in manuscript in your office, had cleared up the actual state of things beyond mistake. Still it appears that highly-bought experience cannot be conveyed by writing to another person not actually in the same case.

I must, therefore, ask your permission to make remarks upon parts of your report in detail, as well for your own satisfaction as for that of the committee of Congress, to whom you will be so good as to refer the whole, which will, of course, occasion the investigation which I have, since September, 1834, as anxiously as assiduously called for; in which, I hope, the assistants in the coast survey, and other impartial and properly qualified gentlemen, will be heard, and all documents and laws duly considered.

(Referring to numbers in margin.)

1. In this place, it is omitted, accidentally, to mention the deduction from the \$500 of the amount which I paid out of it, and which, therefore, is no compensation, but a loss.

2. Captain Swift, to my knowledge, never received the allowance of \$2 per diem, in addition to his per centage. Notwithstanding, I can affirm, in full, that he deserved both; and that his allowance without them cannot be considered as any thing like a compensation for his services, nor half supplying his necessary wants of living in the work.

3. I am sure you find, with me, that plain justice requires, as much as I have done, that Captain Swift should receive what I claim for him.

4. The want of the work required to place assistants in the plane table parties, without regard to rank, which is, besides, in a great measure imaginary in the work, of which every branch requires a variety of great exertions.

5. Though my views upon the explanation, or rather application, of the law to officers of the army or navy doing more than habitual duties, are not coinciding with yours, and though I believe the Treasury Department is positively engaged towards them, by the letter of the Treasury Department of 12th April, 1833, (printed documents, vol. 1, page 103,) in a manner that no law can break, because no law can annul a contract without indemnity, still this is better treated by the positive provoking from Congress such a law as will give to these officers their due.

6. I have not proposed any thing relating to Messrs. Ferguson and Blunt, because I considered them in a different case entirely from the officers, who were besides much harder pressed, as is evident by the very numbers of dollars standing opposite to their names in your report itself. Hitherto I had managed the situation of these two gentlemen so as to ease their situation sufficiently, until I could do better for them. I refer for that to their own testimony. After the next campaign, this management of their position would most likely become impossible; and for that time I had already formed plans, which, not being ripe yet, it was not proper to tell, unless what little I said to Mr. Ferguson upon it in private. I must observe that the situations of these two gentlemen, whom the report considers as equal in point of emolument, are in reality widely different from one another. I refer to their own testimony, and the general investigation, that I was far from neglecting them, and have rendered their position the best of all, and far better than my own is.

7. The withdrawal of any of the present assistants, civil, military, or naval, or any of the other men hitherto employed, with their acquired experience, would be detrimental to the work; and I must add, that all are on the point—even *necessity*—of leaving it, if I should be unsuccessful in putting their situation upon the footing which I have proposed. I did not think

proper to enter in this respect into details, or into any statement that would in me have been considered as a menace. I had flattered myself (in vain, I am sorry to see) that I had acquired so much confidence by what had been produced in the coast survey, under my guidance, in the short time of its existence, as to see my propositions fully ratified, from their simple, plain evidence of truth. I think even that, after due consideration, what I propose will be ratified in full, and what I may propose hereafter in a similar manner, particularly if the present state of things leads to the desirable full investigation of the whole.

8. This is explained in section 4th; and I can add here only, that none of the compensations can bear diminution, but all augmentation. Circumstances commended moderation to me in these demands, just at the moment when these questions were urged.

9. The necessity of this is self-evident from all facts, as we would be obliged to have every work of the kind we used made either abroad or in shops away from me. The delay and ill success of many things would be extremely expensive.

10. A clerk is constantly occupied; and as Mr. Hein is capable to perform the task in German, French, and English equally, as our task requires it, I considered the amount of compensation which I proposed as proper; and I expect it will be considered so, when compared with any clerk hire here in Washington.

11. This is a necessary arrangement, to enable me to take advantage of the numerous offers of young men who wish to enter the work without being fully prepared. By having them one campaign, their capacity will be tried; and they will be proposed as assistants, after they are found proper: if not, it will avoid the inconvenience of the department appointing assistants, whom it may afterwards become necessary to try to get rid of. It is equally necessary for the employment of any kind of artificers, who are indispensable. The disposition I request in this respect, I hope will be fully granted.

12. The absolute insufficiency of my compensation, and its entire disproportion to other works of a similar nature, it is impossible, therefore also not attempted, to deny; and the report handed into the department by Colonel Abert has treated the subject so that I can here only refer to it.

13. The grant there made apparently was consumed by the bills thrown back upon me, and other accessaries occasioned by it. The use of the carriage and horses during the winter has been a great advantage to the weight and measure works. I do not admit that the use I made of this means be considered as personal to me, because it is actually indispensable for the works themselves, as documents and facts prove. Enough has been said upon it before. It is well known that I could never admit the statements of the report to the President of 5th May, 1835.

14. Colonel Abert's report has well treated that subject. To ask minute details of a man's expenses to such an inquisitorial degree as hinted in your report, is certainly as novel as it would be unbearable by any man. Colonel Abert's statement, as an eye-witness, and its conclusions upon the present application of it, are certainly fully valid proofs.

15. The letter of the Treasury Department, of 30th November last, sending me the last quarterly payment of \$125, due last 1st December, declared positively that it would be the last payment; and nothing else has ever been received since, nor even mentioned. Notwithstanding that, in my letter of

21st May, 1835, (printed docs. vol. 2, page 133,) I had proposed to continue for one year longer in the two works, if the allowance of \$2,000 was considered as permanent; an insinuation which was never minded or directly answered by you, and upon which it remains to me only to remark, that on the 21st of next month the year of my engagement is at an end, even under the severest explanation that it might bear against me; while, on another side, I have the most positive refusal of such an explanation by your letter of 30th November, 1835, accompanying the last payment of \$125, and the stoppage of all payment since that time. The comparison with a chief justice is entirely inadmissible. I would willingly let the chief justice try if he could do the work I do, meet the expenses, exertions, and consequences to which I am subjected, with the income stated for them by you. The weight and measure work does not alter any thing in the business, as I took the additional charge of exertions upon me without compensation, out of mere interest for the work which I had begun before, (see letters of 9th and 12th August, 1832, printed docs. vol. 1, page 87;) and had I not shown its utility, and offered—even pressed upon—my activity, it is well known to you that the whole would have been lost, and my former comparisons would have been as unproductive as those of Mr. Adams, and others before, for want of any effect being given to their propositions.

16. This decision of the department has no reference to what I think myself authorized to claim as indemnity for my past losses in general. I only hinted at the denomination under which it could be given with the least trouble.

17. The reference to an investigation here made is highly gratifying, as it will clear up the subject; but I am in duty bound to observe, that, if delay should be inseparable from it, a direct loss of work might be the consequence, as is well known to you.

18. I dislike stating too many details in respect to the compensations of the assistants taken from the civilians, because I consider them as freemen, who should themselves make their agreement with the Government as such; and I shall favor their position and claims, as in duty bound to do.

19. I have stated under section 10th the reasons why \$800, or at least \$750, would be a proper compensation for a clerk. The \$500 proposed is not adequate to procure a man of such ability and confidence as is indispensably required.

20. As for relieving my work, that is impossible. I must give my whole time to it, and have not a minute left for my private concerns; as, however, all the assistants have, more or less. But there is an essential difference in the progress and the economy of the work, if I am allowed to devote my time to the most essential parts of the work, or must go to copying letters, do other trifling accessory, or even manual, works, &c. Thus, it becomes my duty here to state that the difficulties raised against the coast survey, occasioning such a large correspondence as the documents prove, have, by the time they consumed, and the impediments and distraction they brought into the work, cost more than threefold the amount of money of all that I claim, and ever thought of claiming, for my assistants and myself together.

Finally, allow me to add my solicitude for an early decision, that this summer's campaign may not be crippled, like the former ones have been, by the difficulties which hitherto it has been the unfortunate habit to throw in the way of the work every spring.

If the aim of my letter of 27th March should not be reached, that result which I hoped to reach this year in the work will also become impossible.

You will certainly excuse the repetition of things which I have abundantly treated heretofore, as I was compelled to do so on account of their being renewed in your report, without any decision.

I have the honor to be, with perfect respect and esteem,

Most honored sir, your obedient servant,

F. R. HASSLER.

HON. LEVI WOODBURY,

Secretary of the Treasury, Washington City.

A 3.

WASHINGTON CITY,
March 27, 1836.

MOST HONORED SIR : This morning I received from the Secretary of the Navy the information that the coast survey documents would be transferred to you this day.

As it is urgent that the arrangements essential for the progress of the work be made as soon as possible, as I stated also to the Secretary of the Navy, I take the liberty to address you immediately.

Your personal acquaintance with the history of the work, since 1832, when it was taken up the second time, and your perusal of the documents, from as well before as since that period, will make it evident to you why I must in propriety omit all those subjects contained in the same letter, which communicated to me the transfer under the form in which they appear there. The circumstances dictate to me to treat the subject from its principles and origin, leaving out a whole volume of correspondence, which has cost to the country a great loss in the otherwise possible and proper advancement of the work, and to me more money than I am able to lose; besides a loss of health and time, which I would with great pleasure have applied to the best advantage of the works under my charge.

The law of Congress of 1807, which is renewed by that of 1832, directs an accurate survey of the coast and shoals of the United States to be made under the direction of the President, thereby giving it entirely in his hands, expressly dispensing with detailed legislation upon the subject, which was well known to be of no probable advantage. It was therefore also readily admitted at both epochs, when the work was given under my charge, that the work should be done under a contract, as so many other works of the Government, and not in the form of an office.

Thence arose the stipulations which were always fully understood in the Treasury Department, where they were made; but not so in the Navy Department; and which now will certainly be followed again in future, as they have proved proper and adequate when taken as guides.

The other subjects to be decided now, are therefore those relating to the compensation and general standing of the persons engaged in the different parts of the coast survey works, and that of my own allowance for the expenditures, which unavoidably fall upon me, and have hitherto brought me into losses far above my means to bear.

1st. Relating to the per centage to be allowed to the accounting officer of the coast survey, upon the expenditures going through his responsibility, it

has, as well in 1816 as in 1832, been considered as proper and unavoidable to enable such an officer to perform his duties ; and it is of the highest importance that I should be enabled to select for that duty the best obtainable assistance. I persuaded, therefore, Captain W. H. Swift, of the topographical engineers, to accept this situation, under the tenor of the stipulations, fixed already some time before by the letter of the Treasury Department of the 12th of April, 1833, (printed docs., vol. 1, page 103) ; so that he, in fact, accepted it under these stipulations. My choice has proved of the greatest benefit to the work ; indeed, it required the practical acquaintance which he has in fitting out surveying parties, and managing the economical concerns of them, to fulfil the duties which he performed, with that propriety and economical advantage to the work and the Government which he has made proof of during the whole time.

I take, therefore, the liberty to request that you will please to direct that the per centage upon the expenditures for the coast survey, stipulated by said letter of 12th of April, 1833, shall be allowed to him by the accounting officers, as it has been before the stoppage of the Fourth Auditor, from the time of that stoppage and henceforth.

2d. The assistants taken from the army or the navy have, during the first works in the coast survey, already been considered : so that their services in that work are to be reckoned for the land officers as *field service*, and for the naval officers as *sea service*, in whatever manner or rank they may be engaged in the work, as their position in either situation is equally of interest, and equally indispensable for their future independent application of the information they acquire. The positive declaration of this principle now, is highly desirable ; and the President, in whose authority it lies to decide it, will certainly not be averse thus favorably to consider well-deserving officers. It would be highly detrimental to the work, and to these officers and their future utility, if, in order not to lose their rank in the army or navy, they were obliged to leave before proper time for other services. Their stay in the work must be a practical course of studies of all the different parts necessarily occurring in it. It can, in fact, even not be expected that the work should progress properly, if a constant change of new assistants should come in, unacquainted with the preceding works upon which they must build theirs. By such a course, the work would become a school of beginners, varied, unequal, and unavoidably bearing the traces of incoherence. As for the additional allowance of expenditures, I believe you cannot otherwise but find it as just as it has been found by the Presidents and Secretaries of the Treasury, who have stipulated it heretofore. I take, therefore, the liberty to request upon that point merely, that you will allow me to state the amount of it in the different cases, as they may occur ; because the extra expenses which they are to compensate will vary with the cases.

3d. There is another class of assistants, equally indispensable, which I have been able to supply hitherto only temporarily, and of which it will be of great advantage to make steady appointments. First, the chief mechanician for the work. Without such a man, we would not be able to keep the instruments in serviceable order, without sending them to Europe ; which evidently is too much cost and delay, while with such a man all can be done appropriately under my direction. Mr. William Wurdemann has since some time acted as such : he is a very able man in his line, and I propose therefore that he be appointed regularly, with a compensation of \$800 per

annum, and his board. Secondly, a clerk for the multiplicity of writing of all kinds, that the work necessarily produces; the making duplicates of the journal; results of calculations, &c. It is absolutely necessary to have a man on purpose; the interruption which it would cause in the works of the assistants would be detrimental to the work, and often leave me without help in important moments. I have, last winter, employed Mr. Samuel Hein, as such, under promise of making him a steady appointment. I therefore take the liberty now to propose that he may be appointed, with a regular compensation of \$800 per annum, and board.

I must besides request that you would be so good as to allow me to appoint, besides the mere laborers, under assistants, whom we are so constantly in need of, under compensations at an annual rate of from \$500 to \$700, and board, according to the cases. Such arrangements and appointments would always be made by the combination of the accounting officer and myself, in the manner best adapted to circumstances. If it was necessary always to recur to the department for special appointments, the occasion would generally be lost to take the best advantage for the work, as circumstances have proved to us. The board is added in all these cases; because if they were to board themselves, it would complicate the field and camp arrangements so as to consume time, which it is absolutely necessary to economize very much.

4th. In relation to my own allowance for expenditure, the diminution of it, from what it has been rated at in 1816, it was evident at the beginning of the work, in 1832, that it would prove insufficient, on account of the well known augmentation of the price of living, which takes place in all countries, as they advance in civilization, and which is well known to have been very rapid in this country. My situation, at the last time, in the works of the weights and measures, could be considered steady at the \$3,000 stipulated for it. But the President's spontaneous friendly proposition to me, of committing the coast survey work to my charge, joined to my inclination to take up again the exertions which I had formerly bestowed upon the work, decided me so much the rather to do all I could for it, as I saw by the inadmissible plans, then divulged, that the work of the coast survey, and its exigencies and consequences, were more unknown in the department than I had thought. My desire to prevent the full discomfiture of a work of so much real value and interest for the nation, prompted me to make new sacrifices, additional to those I had already suffered in my first works, not doubting that they would be only of short duration. It appeared to me necessary to show, first, what the work, in its proper form and order, would be, to lead to the proper considerations which would secure my position. I therefore contented myself with the reserve in my letter of acceptance of 12th of August, 1832, (printed documents, vol. 1, page S7,) *that this could be easily modified*, considering that the Government could never wish to put me to any actual loss of money. After having repeatedly represented my case, particularly last year, I believe now, under the aspect of what has already been the result of my exertions hitherto, as well in the coast survey as in the weights and measures, I dare take the liberty to renew my instances for the augmentation of this allowance for my personal expenditures to the sum of \$3,000, which these expenses have hitherto annually exacted from me, and that, by dating the increase from the 2d August, 1832, I may be disencumbered from the economical embarrassment which these circumstances have produced, as the result of it has been to the

public benefit, through my exertions above my means, the further progress of the two works will, I am sure, fully justify me.

Not to repeat myself too much, I take the liberty to refer to the various documents which treat the subject, as in the printed documents, vol. 1, pages 120, 155, and vol. 2, pages 68, 96, 126, 129, 133, 153, 154, among which I must specially refer to my letter to you of 21st May, 1835, where I stated in section 4, *I would try still that year* to make out with the augmentation of that allowance of \$2,000, by modifications in my arrangements; (printed documents, vol. 2, page 133.) These modifications consisted in taking advantage of the advanced state in which I had placed that part of the work which falls upon me personally, and of the non-reception of the great theodolite, indispensable for the main triangulation, not to go into field work myself, and to limit my task to the directions of the secondary triangulation, and the plane table and sounding parties, for which my task required my presence here; by which means also, I was enabled to attend simultaneously to the weights and measures, as stated to you before, going out early in the fall to meet my assistants, for various arrangements and work. Notwithstanding that arrangement, previous impending circumstances increased my embarrassments even last year.

This year the arrival of the great theodolite from London, the absolute necessity of filling up and continuing the main triangulation with it, positively prohibit this remedy for my expenditures; and I must, after having completely exhausted my private means, present in full the real state of my situation, and ask that you will be so good as to remedy it; the authority for it, as well as the means and manner of doing it, being entirely in your power, while my means are not able to lead me a step further.

Without presuming to dictate the manner in which the compensation may be arranged, which will enable me to continue my services to the Government for the two works to which I intended to devote myself, I will take the liberty to suggest here the mode which appears to me would reach the aim in the simplest manner, and in the easiest form of compatibility, thus:

1st. That I should receive for the weight and measure works the annual allowance of \$1,500, counted from 2d August, 1832, to the end of the present quarter.

2d. That from this amount be deducted the \$500 which I received last year, in four quarterly payments, and that the accounts charged to me, from the coast survey upon that, be admitted in the next accounts of the accounting officer for that work, in deduction of so much thereof.

3d. That from the 1st of next month, my full compensation for my work shall be \$3,000, for compensation, (as before,) and \$3,000 as allowance for personal expenditures, as regulated by the stipulations of the articles of agreement in 1832, which were confirmed by the letter of the Secretary of the Treasury of 9th August, 1832. This amount then will be no more than the habitual compensation of a chief engineer of a canal or rail-road, where all expenses and exigencies are by no means comparable to those of the coast survey; it is, therefore, by no means an unusual compensation.

You know that I ought absolutely to go off to New York for the weight arrived there with the great theodolite, and also to take arrangements for fitting up that instrument for use. I must, on that account, take the liberty to request your decision, in order that I may have the means to execute that as soon as possible.

It has been a very painful task for me to recur here again to the subject

of the 4th article of this letter, but I am in this respect, under the absolute command of the law of necessity. I have no doubt, that, with your present acquaintance with the works under my charge, their bearings and consequences, and my manner of acting in them, you will decide it by a fully favorable answer; that I may devote myself to my task, with that freedom of mind and position which its adequate execution indispensably requires, and which I am so willing to bestow upon it, by a fully exclusive devotion to my charge, which I hope you will make possible to me.

I have the honor to be,

With perfect respect and esteem, most honored sir,

Your obedient servant,

F. R. HASSLER.

HON. LEVI WOODBURY,
Secretary of the Treasury.

A 4.

TOPOGRAPHICAL BUREAU,

Washington, April 18, 1836.

SIR: In conformity to the wish you have done me the honor to express to me, I shall endeavor to lay before you, as well as I understand them, the views of Mr. Hassler in relation to the survey of the coast. These refer to—

1st. The accounts of expenditures, and

2d. The personal compensation of himself and assistants.

The difficulties which have heretofore proved so embarrassing to Mr. Hassler upon the subject of the accounts, may be supposed to be remedied, as the settlements will now be made by the First Auditor, whose knowledge, from his experience in former adjustments enables him to decide without delay upon the similarity, and consequent propriety, of the expenditures. This experience was not possessed in the Fourth Auditor's office, which had the adjustment of the accounts after the transfer of the duty to the Navy Department. To this cause, as well as I understand the case, the difficulties which have been of so harassing a character to Mr. Hassler, owe their origin.

Mr. Hassler contends for the principle that all the expenses of a contingent character are properly the subject of his discretion, and that the voucher which should be satisfactory and accepted is one which carries on the face of it the proof of the expenditure, of his direction in the case, and that the price is a fair charge for the object.

I do not see how the work can be conducted under any different rule. Certainly the judgment of Mr. Hassler ought to be considered the best on these matters, and I do not see how any other can be relied upon. If it should be required of him first to consult the department, it will amount to an exorbitant increase of expenditure, and the ultimate defeat of the work: an exorbitant increase, by keeping the whole party waiting and in pay until the object of the contingent expenditure can be approved; a defeat of the work, from the loss of time, never to be regained, which such a course would infuse into it, and from delays so injurious and so frequent that the work could not be conducted.

The objection to the exercise of this control by Mr. Hassler must arise from a want of confidence either in his integrity or in his discretion. The

first is of course out of the question ; it cannot exist, or he would not be intrusted with the work. As to the second, I can safely say, from two years' experience with Mr. Hassler on this duty, that I never knew him to direct a useless or unnecessary expenditure ; and from my knowledge of his accounts, since the commencement of the duty in 1832, the same remark will apply equally to them.

To judge of the propriety of these expenditures, requires not only some knowledge of the duty in the abstract, but an actual experience in the field. The accounting officers cannot be supposed thus qualified ; and yet, if they are allowed to reject or admit vouchers for the contingent expenditures, they become *de facto* directors of the operations of the survey, and may embarrass or destroy the work.

The right of rejecting or of admitting a disputed voucher, can exist only in the Secretary of the department which directs the duty. The authority of an Auditor is an authority of law, not of discretion. The appropriation for the survey of the coast is general for that object, and not specific, by which a comparison of an expenditure with the specific expression of the law can be made. A judgment of the propriety of an expenditure, under such circumstances, is therefore a judgment of discretion, and not of specific law ; a discretion whether or not the expenditure is adapted to the promotion of the object of the appropriation. Such discretion, according to the theory of our Government, is vested in the Executive ; and according to its practice, in the head of the department under which the duty is performed, which head is always supposed to express the will of the Executive on the subject.

It does not appear to me possible that the work can go on, if the principal, whoever he may be, is denied the right of directing the contingent expenditures ; nor any remedy for a want of confidence in the discretion of the principal, short of a change of the principal.

But the principal, whoever he may be, in order to justify the Executive in the expenditure of the public money, should always, when called upon, render the most full explanations in relation to an expenditure. And the department has it also always in its power to refer to the many and highly talented assistants upon the work. It cannot be supposed that these are without the capacity to judge, or without the integrity to give candid opinions. As before remarked, however, whenever the doubts in the discretion of the principal assume so serious an aspect as to justify a withdrawal of the discretion, the better course would be to change the principal, as, without the possession in him of this authority, the work cannot progress.

In addition to the explanation of expenditures, a check can always be exercised by requiring the previous approbation of the department in all cases in which the delay to obtain that approbation will not embarrass the work.

Mr. Hassler may have peculiar notions on these subjects, which may not exactly tally with an Auditor's views ; but these notions are rather in manner than in matter ; in the latter, he will be generally found to be correct.

But genius has always its peculiar notions, its short and rapid roads to results ; hence men of genius are considered as in advance of their age, and labor more for posterity than for their own time.

In industry, in knowledge of his business, in enthusiastic devotion to its prosecution and success, he is not easily to be equalled. I may speak with some confidence on these matters, as I have known Mr. Hassler since 1808,

when I entered the Military Academy as a cadet, and he was then the professor of mathematics at that institution.

2d. The personal compensation.

This part refers to the personal compensation of the principal, and of the military, naval, and civil assistants.

In the year when the field operations of the survey of the coast first commenced, Mr. Hassler, under whose charge the duty was placed, was allowed a compensation for his time and services, \$3,000 per annum; and for the purpose of defraying his expenses, the further sum of \$2,000 per annum. At that period, after much investigation and inquiry, in order to free him entirely from the reflection and time which an attention to his personal economy would require, and enable him, without unhappy and painful anticipations on such a subject, to devote the whole force of his mind, and the whole of his time, to the duty upon which he was engaged, the sum of \$2,000 per annum was considered a necessary allowance for his expenses.

Being then attached to him on the duty, and the most friendly relations existing between us, to relieve him from every care but that of the duty, I attended to many (I may even say the greatest part) of his private expenses for him, and, from a personal knowledge of these, in that way acquired, I can say, with perfect confidence in its correctness, that the whole of this allowance was generally exhausted for the purpose for which it was bestowed.

The duty necessarily involves much personal expense. It lies generally away from towns, along the coast, where the necessaries of life can be obtained only by sending for them; adding thereby to their cost, the expenses of such errands, subject also to all the losses from exposure and weather, and to the waste inseparable from temporary encampments, or where, as it occasionally happens, a tavern can be occupied, subject to high charges for daily board.

That this allowance might now be found adequate to its object, by a strict and vigilant attention to one's personal economy, is not improbable; but then, as a consequence, the great work, the principal object of his appointment, must be to that extent neglected. If the principal has to cheapen every article he consumes, if he has to watch over its preservation from weather or waste, he may make the allowance meet the expenditure; but there will, of course, be so much the less public work done; and that single and exclusive devotion of time and mind, which such a work requires, and without which it cannot prosper, will not then be bestowed upon it.

But if 2,000 dollars was then considered adequate for the purpose for which it was allowed, the slightest reflection upon the increase in the cost, of every article necessary for the support and comfort of man, since, must prove its entire inadequacy now. The whole range of articles of human consumption have, within a few years past, experienced a gradual, steady, and great advance in cost, 40, 50, and on many items 100 per cent. And the steady manner in which this increase has proceeded, is evidence of results from deep-rooted causes—a general and permanent advance in the prosperity of all classes of the community, and therefore, in all probability, of enduring effect. If the allowance then was intended, as no doubt it was, to meet the object expressed, when that object becomes so essentially modified, and that modification has every appearance of so much perma-

nency, it would seem not only reasonable, but just, that the allowance should undergo a comparative modification also. Mr. Hassler's views are, that the allowance for this object should be made \$3,000, which I do not think more than a proper consideration of the case would fully justify.

There is another view of the subject, which it appears to me proper to take—I mean that arising from the general estimate of the country of the value of the services of scientific men.

There is scarce a company in the United States, incorporated for any object of internal improvement, which does not pay to its principal engineer a greater compensation than that allowed by the United States to Mr. Hassler. And when one considers the extent of elementary education in the first instance, the years devoted to practical operations, the profound and extensive mathematical and scientific information required by him, who may be called upon and be competent to direct such a work as that of the survey of the coast, and then makes a comparison of these qualifications with those called for in the civil engineer operations alluded to, it is impossible not to be struck with the great inferiority of the latter, in comparison with the former. In fact, the inferiority is such, that no comparison can be made. One is the Alpha, the other the Omega of the case. Young men of active minds, moderately educated, and after a few years of experience, are competent to the one; for the other, a spark of genius must illuminate the intellect, years of devoted and laborious study must give it knowledge, and an experience which will always be found to bring its possessor beyond the medium of life, will have to unite in giving the requisite qualifications. For the one, hundreds are to be obtained; for the other, the Government has as yet been able to lay its hand upon a single individual only.

When Governments have therefore use for these rare and extraordinary qualifications, they should not only cherish them with the utmost tenderness, but should compensate them in some measure adequate to their rarity, to the labor and time required in the first elementary education, to the years of after devoted study and practice, and to the reflection that men of minds so organized are always poor. Even genius cannot make more than twenty-four hours out of a day; and when all the time but that which is necessary for the restoration of exhausted nature is devoted to intellectual and scientific pursuits, none can be left for domestic economy.

OF THE MILITARY ASSISTANTS.

These are officers of the army, who get no more than their bare military allowances.

The allowance to officers of the army is made on the supposition of military occupation in garrison or in camp. In either of these situations, they form societies of their own, can adopt economical modes of living, and are masters of their own habits and expenditures. The allowance to officers under the circumstances stated, is found sufficient for their support. But when an officer is removed from those circumstances, exposed to daily tavern charges, or the losses and waste of temporary encampments on surveys, his pay is not adequate, and very few of them escape debts. His living also is no longer of his own choice; he is made a member of civil society, and must conform to those conditions of dress, appearance, and living, exacted by the society into which he is thrown. He has no other

alternative than to conform to those conditions, or abandon society. If he takes the first, with his bare military allowance, debts and embarrassments are a consequence; if he takes the latter, although debt may be avoided, he must retrograde in his state of civilization; become, in consequence, a reproach to himself and his profession, lose character, and lessen in usefulness.

The power of the Executive to order officers on these extra duties is not to be questioned; nor the pride and pleasure with which those orders are received. The officer considers them a compliment. In fact, they are so. They are evidences of presumed intellectual qualifications. But it is a question for the fostering regard of the Executive, to those who devote their lives and minds to the service, whether justice does not require an increase of compensation to those whose circumstances, so much altered by orders of the Executive, call for so great an increase of expenditure. The case is particularly hard in reference to the officer by whom the payments are made. The whole appropriation for the survey of the coast passes through his hands, and yet he is not allowed one cent for the risk and responsibility he encounters. He must be extremely fortunate if he avoids losses, as every error and rejected voucher is charged to him. This appears to me unjust. His compensation as an officer was never intended for such a duty; and because his exact business habits and integrity occasion him to be placed in such a position, it should not be, as it now is, without compensation, and with the probability only of losses.

During the years 1816 and 1817, when upon this survey with Mr. Hassler, I was also agent of disbursements for the Treasury Department, and was allowed for this duty, by that department, a compensation of \$2 50 per day. At that time, the disbursements for this service did not exceed 20,000 dollars the year; now, they amount to more than double that sum.

THE ASSISTANTS FROM THE NAVY.

If I understand Mr. Hassler correctly on this subject, it is, that the survey of the coast should, in relation to these officers, be considered "*sea service*," as well in reference to the pay as in reference to the allowance of the time they are occupied on the service; that is, that this time should also be considered as "*sea service*," in respect to rights of promotion. Although the duty may not add to their experience as seamen, yet it must perfect them in that knowledge so essentially necessary as navigators, and it cannot fail to make them accomplished hydrographers. That such information should be obtained by a few of our naval officers, if even at the expense of some practical seamanship, is, I think, a sufficient compensation, and ought not to inure to the prejudice of their promotion or pay.

And in reference to these military and naval assistants generally, when once placed upon the duty, and exhibiting those qualifications and habits which give assurance of increasing usefulness, and without which they can never be intrusted beyond the most ordinary details, they should be considered as permanently attached, and not liable to be called off, on every temporary emergency of the arm of service to which they may belong. Without the adoption of such a rule, it is in vain to expect either the necessary devotion or the necessary improvement in the assistants. Upon a duty requiring, in addition to the best elementary education, years of study and of experience in its practical operations, those years must be allowed, or the knowledge necessary to the higher functions of the duty can never be obtained.

OF THE CIVIL ASSISTANTS.

I am not fully aware of Mr. Hassler's views in relation to these officers; but I believe they are, that those intrusted with parts of the secondary triangulation should have their allowances increased, and that there should be a settled compensation for the several classes, to which each should be entitled as promoted.

Having thus alluded to these several details, I hope to be pardoned in making a few general remarks.

A survey of the coast, as understood by all informed men, is a duty which requires the exercise of the highest functions of mathematical knowledge, and the utmost skill and expertness in practical astronomy. Those who direct its operations must be profoundly scientific; must be informed of all improvement in observing; all recent observations; all recent discoveries of the properties of the heavenly bodies; all improvements in the construction of instruments; of all new tables, and corrections of the old. It is necessary, therefore, for this duty, that there should be a central office in correspondence with scientific men of other parts of the world, exchanging knowledge, and which should also be possessed of an adequate library.

It is likewise a work which must, of necessity, endure for many years; must call for great expenditures; and will, no doubt, in time, extend to an exact survey of the whole country. From these considerations, it is evident that a regular system of compensation and of operations should be adopted, and that the Government should possess itself of those who, properly educated, and having also the proper devotion to such pursuits, give earnest of their ability to succeed in the direction, as time or accident may remove a principal. Every proper encouragement should therefore be given to those who have the peculiar turn of mind and the necessary qualifications, and every reasonable assurance that while their conduct merits the approbation of the Government, and the duty lasts, they will not be without its support.

Men of science need food, raiment, and means of maintaining and educating their families, as well as men of other pursuits; while their occupation cuts them off, nay, unfits them for the general vocations of society, by which others obtain these means with so much more ease, and in so much more abundance.

It is Governments alone which can create such men, as it is the wants and means of Governments alone which can compensate them for their labor, and encourage them in its pursuit.

The time has now arrived for the decided action of the Government on this matter, and for the adoption of those liberal, well-digested, and settled principles of management, which shall insure the greatest benefits from the money expended, and which will leave the Government free from apprehension that it cannot find always at its control those fully qualified for any duty it may have to perform.

The present is the only school in our country in which such individuals, properly educated, can be formed; and if advantage is not taken of it, we may look to no very distant day when the work will have to be suspended, until we can find among the citizens of other nations some one competent to take its direction in hand.

I have the honor to be, very respectfully, sir, your obedient servant,

J. J. ABERT,

Lt. Col. Topographical Engineers.

Hon. LEVI WOODBURY, Secretary of the Treasury.

P. S. Allow me to suggest the following principle, as a guide in determining the compensation for the military and naval assistants :

Having decided upon the compensation for the civil assistants of different grades, then to allow the officers of the army and navy, when employed on a part of the work equal in character and responsibility to that of the civil assistants, the same compensation as the latter.

A 5.

TREASURY DEPARTMENT,

May 9, 1836.

SIR: I have the honor, by direction of the President, respectfully to invite the attention of the Committee on Commerce of the House of Representatives to the subject referred to in the enclosed papers marked A, B, C, and D, in regard to the compensations of the superintendent and assistants, together with the other subordinates engaged in the survey of the coast, and to urge upon the committee the expediency of providing by law for regulating the same. It will be perceived by my report to the President, marked A, that, owing to existing laws, the officers of the army and navy detailed on this service cannot be placed on an equality, in regard to compensation, with the civilians who are performing similar duties; and it would appear but reasonable that all who discharge the same class of duties should be placed on an equal footing in this respect. With respect to the rate of pay of the superintendent and his assistants, it is respectfully submitted to the committee to determine and fix what would be a reasonable allowance upon a due consideration of the science, skill, and experience possessed by them, together with the great public importance of the work in which they are engaged.

I beg leave to refer the committee to the communication marked D, from Lieut. Col. J. J. Abert, of the United States topographical engineers, whose statements are entitled to much consideration and weight, he having been heretofore employed on this work as an assistant to Mr. Hassler, and, from his present official station, possessing accurate knowledge in regard to the details and expenses incident to works of this nature. I would only further and respectfully add, my anxiety that this subject may engage the early and earnest attention of the committee, and my recommendation that the agents employed in a work of such national importance may be compensated upon a scale proportionate to the peculiar qualifications in science and practical experience required for its successful accomplishment.

I have the honor to be, very respectfully,

Your obedient servant,

LEVI WOODBURY,

Secretary of the Treasury.

HON. JOEL B. SUTHERLAND,

Chairman of the Committee on Commerce, H. R.

P. S. As the papers marked A and C are originals, I will thank the committee to return them to the department when done with.

A 6.

HOUSE OF REPRESENTATIVES,
July 4, 1836.

The undersigned, members of the committee, in returning the papers relating to the employment and compensation of the persons charged with executing the coast survey, beg leave to express their opinion, that inasmuch as the direction of that work is committed without any qualification to the discretion of the President, the interposition of Congress in regulating any of its details is not required; and they fear it would embarrass and retard the execution of the work, were they to submit to the House the questions of which the President has requested their consideration. They have no doubt that the existing difficulties may be satisfactorily adjusted by his decision upon the statement of the case as you have submitted it to him.

The committee have felt it to be their duty, in respectful compliance with your request, to investigate the claims of Mr. Hassler and his assistants; and they would suggest, that, placing a very high estimate upon the value of the laborious and complicated services of Mr. Hassler, and upon the advantages to be derived from his experience, and seeing no reason to doubt the accuracy of his statement in respect to the expenses to which he is subjected, they deem it for the public advantage, and, under the circumstances, not more than is equitable, to accede to his propositions: viz. to fix his compensation at \$3,000 per annum, and to allow him the same sum for his annual expenses, and to authorize the settlement of his account at these rates from the 2d of August, 1832, the period since which he has been employed, both in the execution of the coast survey, and in the preparation of the standard of weights and measures. They would also recommend a liberal regard to Mr. Hassler's suggestions in respect to the number and compensation of his assistants; and should legislation be deemed indispensable for the purpose of authorizing an additional allowance to such of the assistants as have been taken from the army and navy, the committee entertain no doubt that Congress would readily pass a resolution, which might be introduced at the commencement of the next session.

We are, sir, respectfully, your obedient servants,

J. B. SUTHERLAND,
R. H. GILLET,
DUTEE J. PEARCE,
S. C. PHILLIPS,
SAMUEL CUSHMAN,
SAMUEL INGHAM,
JOHN McKEON,
H. JOHNSON,
H. L. PINCKNEY.

HON. LEVI WOODBURY,
Secretary of the Treasury.

A 7.

Enumeration of sacrifices, which I made for the coast survey.

By direction of President Jefferson, Mr. Patterson in Philadelphia, and I at West Point, agreed by correspondence 1807-'9, upon the instruments required for the coast survey, their peculiar construction, and the manner of obtaining them, for which I was offered to go to London. This, however, was deferred until 1811, when I was advantageously placed as professor at Schenectady, where I made beforehand all the drawings, descriptions, &c., for the artist.

The confidence placed in me by the President and Secretary of the Treasury of that time, which showed a disposition to execute with propriety and liberality a work of so much interest and importance, as well for the nation as for science in general, as the coast survey of the United States is, appeared to me to promise a liberal treatment on my return from the satisfactory execution of the mission, and induced me to accept it at a rate of compensation and allowance which it was evident would cause to me a direct loss. At the date of my departure from Schenectady begins my first compensation.

Mr. Gallatin, being in London when I was near the end of my mission, was himself witness, and acknowledged to me, that my mission must be unprofitable to my economy. I had, in all, about £940 per annum, and, with the most economical and pinching life, I had to spend £1,100 annually.

This, in the four years of my stay, was already a direct loss of £640, or \$3,200; besides that, I had to pay the passages for my family, mine alone being allowed by Government.

But after the second year, my drafts for my compensation were protested here, notwithstanding I had the positive authorization from the Treasury Department in hand, (saying that Mr. Beasley, who was then agent for prisoners of war in London, who bought my drafts, did it out of the public money, being indebted to the Government and in a breaking condition.) To live under these circumstances in London, and to attend to the interest of the Government in the object of my mission, I had to break up capitals in Switzerland, which were at proper interest, to the amount of all that difference, (as stated P. D, F, P,) which the unfortunate further circumstances in the coast survey have never since allowed me to gather again. When I was ready to come home with the instruments, Messrs. Baring, of London, bankers of the Government, refused, notwithstanding the recommendation of Mr. Gallatin, to advance me any money to make my voyage home, and even made difficulties to pay the balance of the public accounts for the instruments. I was therefore obliged to borrow in London £450 to clear my position, and bring the instruments to Philadelphia. When I arrived in the Delaware with the instruments, I notified the Treasury Department of my arrival and destitute state in money. I was answered that there was no money on hand, and referred to bank accommodation, which I was of course obliged to resort to, until I had sold some instruments of my own; out of the proceeds of which I continued to live, and to make the preparations for fitting the instruments for use, from the fall of 1815, until next midsummer: when my accounts were settled, and I received the balance due to me of \$6,500 in notes, losing eight and fifteen per cent.; and out of this I had to pay the £450 which I had borrowed in London, at a premium to my loss of twenty per cent.

The amount of the drafts sold to Mr. Beasley had not yet been fully paid to me in London, when the information of the protest of my drafts arrived ; Mr. Beasley, keeping the balance, had made me sign a note for the excess of the damage upon the protested drafts over the same. The Secretary of the Treasury promised to me that this note should be taken back from Mr. Beasley, when the drafts would be paid to him ; (which was done, in cash, at the same time when my accounts were passed, as he was then in Washington ;) but the note being left to him, and he appointed consul to Havre, in passing through New York he gave there the note to his attorney, who sued me for it. On my application to the Treasury Department for protection, I was denied it, and the principal documents which had been communicated even were lost.

So I was obliged to try to put a stop to the suit by other means, in which I succeeded, but had about \$200 loss by it.

When, in 1816, I had taken all the proper arrangements with Mr. Dallas, Secretary of the Treasury, he left the Treasury, and Mr. Crawford, who followed him, immediately began by refusing any funds to set the work in activity ; so that I had to begin it with my private means, and so it happened several times after.

To attend more closely to the work, which was begun in the neighborhood of Newark, N. J., I removed there from Philadelphia, and made an establishment at considerable expense, hiring rooms for the instruments, &c., for which nothing was charged.

When, by the transactions here in Washington, under the most untrue accusations, during the time that I was hard at work at the necessary calculations, the law was obtained in Congress which expunged me ; all these establishments turned into a direct loss, my whole establishment and many things which I had already in London, procured for it on my private account, in order not to increase the public account by a number of accessaries ; my loss in this was upwards of \$3,000.

I offered my library and remaining instruments to sell to the coast survey collection for \$4,500, and Col. Roberdeau was at my house at Newark, to receive it, when, contrary to the hopes held out, the whole was refused, and I thus deprived of means to turn to another use that part of my establishment which had been most particularly destined for that work. I was of course afterwards obliged to sell it in scattered parts, for a mere trifle.

In the spring of 1818, when the coast survey was broken up, I was directed to proceed, by the late President Monroe, to parallel of 45°, on the boundary line with Canada, when the coincidence of the British astronomer and myself gave the highest satisfaction.

On my return from thence, the carriage, horses, and other appurtenances of the coast survey, (instruments excepted,) which I had with me on the boundary line, were sold at auction.

As it had appeared intended that I should continue on the boundary line next year, and the carriage and horses for the main instruments were indispensable in that work, as much so as in the coast survey, I purchased the carriage and horses, had all put in good repair, as it had been badly broken in the woods of Chetsangai ; kept the driver, and incurred all the expenses of maintenance, which brought the whole amount to about \$1,200, which turned into a complete loss for me ; because, in the negotiation for my services on the boundary line, all reasonable arrangement was refused

to me, as well for the thirteen months which I had served in it, without previous agreement, as for the future.

Thus I had suffered, before 1820, losses, in a variety of shapes, consequent on my connexions with the Government, which I always estimated at upwards of \$12,000.

When, in 1832, the coast survey was again offered to me by the President, I had been engaged in the weights and measures, and was willing to continue both works, provided the increased expenses of the moveable life which the coast survey requires were fully compensated to me.

But instead of meeting any proper ideas upon the nature and exigencies of the coast survey work, I found the most inadequate, and even discreditable plans, had been proposed. All my propositions were met with difficulties; the allowance for expenditures was diminished from what it had been rated at in 1816; instead of that, now these expenses are actually double. Not to suffer the work to take a discreditable turn, I decided to make new sacrifices, by accepting the compensation, evidently too low, under the positive reserve of bringing the subject up again, when experience should have been collected, and the nature, exigencies, consequences, and results of the work could be better known. Experience has proved to me, since, a regular annual loss of \$1,500, which has brought me into such an embarrassed economical situation, that, without compensation of it, I shall not be able to move.

Also, since 1832, accessaries occurred which occasioned losses to me. At the very first outset, funds were refused to begin with, so that I was obliged to borrow \$2,000, for two months, and pay discount for it. The transfer of the coast survey to the Navy Department was the signal for impediments in every part of the work; the Fourth Auditor, in his expressions upon the accounts rendered by Captain Swift, allowed himself language against me, which no honest man can suffer. To vindicate my character, I was obliged to cause to be printed, at my private expense, the first volume of the principal documents relating to the survey of the coast, and as, notwithstanding the full explanation and justification which these afforded, the attacks were renewed by reports to the President, I was obliged to have also the documents of litigation, thereby occasioned, published in a second volume.

This printing occasioned to me an expense, evidently improper to be laid upon me, of about \$500 to \$600; it was indispensable to spread the truth of the real facts in proper places; therefore, also, this my measure was always approved by the President. If I had not made this sacrifice, such advantage would have been taken of the Government and Congress, that the work would have been lost, like in 1818, where undue advantage had been taken of my absence from Washington, and the want of information upon the nature, real state of the work, &c., in Congress.

My losses since 1832 amount, therefore, already now again, to between six and seven thousand dollars, which alone is more than I can bear.

The statements of my letter to the Treasury Department of 27th March, last, are all indispensable to be admitted, if the work shall possibly progress; this will be evident to any man investigating the case with proper knowledge, and the information which can be collected from my assistants and other well informed gentlemen. I therefore confidently hope, that I shall not be obliged to publish a third volume of the complementary documents to the day of close, together with the history of extra documental parts, in full vindication of my conduct and character, which will prove

the full purity of aim and conduct which I have observed in the whole of my connexions with the Government since 1817, and the disinterested perseverance which I have put in all my actions for a work of great national value. The union of the two works, of the coast survey and the construction of the standard of weights and measures, now extended to the States and Territories, puts at disposal to employ sufficient funds legally applicable to the works, from which, therefore, it is perfectly easy to order the indemnification for my past sacrifices; which, I hope, it will be found by the above, that I may claim with full justice.

But as well the wants of the works under my charge, as the absolute impossibility for me to go to the field work of the coast survey without this relief, render an early decision extremely desirable in all points of view.

F. R. HASSLER.

WASHINGTON CITY, June 8, 1836.

A 8.

Upon the principles of the determination of salaries, or compensations, in a republican Government.

1. The offices or functions to be performed in the administration of a republican Government divide, very strikingly, into two distinct classes.

2. The first of such offices as are the gift of the people, the appointment to which is therefore grounded upon the credit of a man in his nation, and the confidence which is placed in his intellectual capacities, moral character, fitness, and strength, for the high trust committed to him.

3. Such a man can in no case be a man who has need to, or should, or would, seek an office as a means of living; as such capacities will always enable him to provide for himself and family, he can always safely build upon the broad base of the public, and the credit which he is able to procure to himself; the same, evidently, which fixed the eyes of his fellow-citizens upon him, for the election of a high trust.

4. In most cases, even the very position in society which enabled him to attain the intellectual improvements for which he is distinguished, had determined his independence before; and his merit consists principally in having made proper use of these means already in youth, for which he is so much more commendable, as there are more temptations in the way of youth in that case; and if he is entirely the builder of his high standing in society, no man will dispute his merit.

5. In both cases, he must have acquired liberal feelings, such as would not allow him to seek for any office of high trust in the nation, for the sake of pecuniary gain; nor to refuse it, if liberally offered by his fellow-citizens. He will consider his exertions in the cause of the public good, as a return due from him for the confidence he has received.

6. Thus, the distinction received from his fellow-citizens is the principal remuneration that he receives; and the satisfaction which he may give in the execution of his trust will not fail to place him in such a situation as to make his life happy and easy, if ambition for glory does not intermix.

7. However, this man must be also compensated for his services, for the

public, as little as any man, has a right to his services without remuneration. His salary, however, should be moderate; not with any allowance for rank, otherwise than what is absolutely required; the numerical amount is entirely depending on the habits of life in the society, and varies, therefore, also with the time. It has generally been considered, that it should be equal to the mean of a man's earning in the liberal professions; that is, such as depend upon intellectual means and exertions; the highest and the lowest results of such professions are actually the results of chances, which shall not come into consideration in this determination.

8. It is further to be considered, that all such offices of high trust must necessarily, in republics, be temporary, limited by law; and that therefore the tacit contract, made by the appointment between the nation and the individual has its predetermined limits, and the individual is not kept under too long an obligation, if it should prove too detrimental to him in economical respects.

9. To this class of public officers belong all members of legislatures, all higher executive or administrative offices, under whatever denomination they may be habitual in a country, state, or union of states. Only with such depositions, these bodies, or single men, can be expected to act with that freedom, and independence, and liberality, which is the first element of the good which a Government can and shall do in a country. This is certainly too evident to need detailed deduction or demonstration. To count up the innumerable evils that must necessarily be the consequences of an opposite state of things, is certainly as needless as it would be too long.

10. None but a king may wish for high-paid ministers; in some measure it is necessary in that form of government, and therefore it is just so highly to be deprecated in the republican form of government.

11. The second class of offices in a republican Government are for what might be called the work which must be done *for* the Government, in all the varied parts of the administration of a country; the persons engaged in them are seldom, if ever, elected by the people; they must be intrusted to such men as can be considered as deserving respect in proportion to the value of the services they are able to perform, for which their qualifications, acquirements, and moral character must render them desirable; but at the same time, as working for the Government, like for every other man, for such an adequate remuneration as will secure to them and their families the same result of independence which they would have a right to expect in their pursuits from the public generally; that is, they must be liberally paid in proportion to their services; in fact, the Government should in each branch procure the best services, therefore pay the best.

12. The highest class of these offices are the judiciary offices; in fact, in importance and respectability, equal to the Government itself; they are seldom elected by the people at large, but always should emanate directly from its representatives; (the so-called prerogative of the king, or executive government, to elect judges,) which does not exist in any of the old republican Governments of Europe, is still a remaining proof of the origin of the Governments. A man distinguishing himself in allaying the difficulties of misunderstanding between his neighbors, came habitually to be called upon in his capacity of superior judgment, and the trust laid in him gave him the means to govern his neighbors; thus arose gradually Governments, which circumstances extended, modified, and even often rendered obnoxious.

13. The position of a judge must necessarily be entirely independent in intellectual, moral, and pecuniary respects; his income, which must be a regular salary, no fees, must place him in a respectable rank in the society in which he has to move. This is in every respect, and in all countries, so fully acknowledged, that no doubt can exist upon it, but only to be lamented that it is so often disregarded, and particularly where the executive authority of any kind has the election, by which it is led into the mistake of considering this prerogative as acknowledgment of its superiority.

14. All other offices are to be paid in proportion to the quality, and, as often as ever possible, also to the quantity of the work performed. Thence, for instance, it is proper in all cases where public revenues, or expenditures, are to be administered, so as to actually, in some way or the other, be under the disposition or responsibility of an officer accountable for it, he should be paid by per centage, calculated as well in proportion to the labor required of him, as the weight of his responsibility, and its possible chances. No officer in such a case must be considered as simply engaged for services, whatever the position may be; in fact, the universal habit in all social transactions of the kind, proves sufficiently the necessity of this principle.

15. It is most generally, and with propriety, habitual to request in such cases a certain additional security from the officer thus intrusted, the amount of which is based upon the probable amount for which he may be liable at a time; no right can exist to request that, unless the compensation be also based upon the same principle, that is, a per centage; and no officer can be loaded with an additional duty of accountability without that per centage, in whatever way he may be otherwise engaged with the Government.

16. In the case of the two last sections, are all collectorships of public money of any kind, and all disbursing officers of any kind, postmasters, land office receivers, &c. &c.

17. There are a great many of the services needed by the Government which can be rated by the quantity of work that is performed, particularly such as are in this respect variable, and dependant on incidental circumstances and positions; in all such cases the only just, therefore the most proper mode of compensation, is by the quantity, after the unit (as it might be called) of the work has been properly estimated. Such are, for instance, surveying of public land, in the custom-houses, weighers, measurers, gaugers, discharging and boarding inspectors, (which are by mistake not distinguished from the inspectors used to go about as guards against smuggling, who cannot be paid but by the day;) while the discharging inspector would, with great advantage to the merchant and the Government, be paid by the ton.

18. In all cases where the services rendered imply necessarily others than the mere domestic life of a man with his family, who, working a certain number of hours in a day, has time given to him to attend to his domestic economy, the difference between such a life and that which the officer, or appointed man, has to lead, is to be compensated in full; and the best way to do it is, by an estimate upon the whole, liberally calculated; for it must be observed, that even with a liberal calculation for such an allowance, the progress in the manner of living, which, particularly in that case, a man cannot escape to partake in, will gradually diminish the real value of such an estimate, made at any time, and it will have to be augmented after a certain time. In this predicament come all travelling expenses, mileages, and such like, which are most likely now by no means adequate for having

been determined some time ago ; for it must be observed, that with the increase of the facility of travelling, the expenses do not decrease ; often rather the inverse is the case ; and circumstances even momentous decide more in the case than is calculated upon.

19. Mere salary offices can only be clerkships, military and naval service, in their common course of business. All extra office hours work, or special charge given to an officer, it is proper in justice to pay to the respective men thus charged, as in justice they are only bound to do that work which is rated as comprehending their duty ; if not regarded in this way, it reduces them to a situation too much approaching menial services, that the Government could expect to keep men of respectability satisfied in its service ; the hard feelings arising from such a state are extremely detrimental to the works, for no man works successfully if he does not work cheerfully ; and such ways taking away the satisfaction in the work, destroy also its cheerful execution. That such a state of things is a direct loss for the nation, and contrary to all economy, is evident.

20. In general, in giving any office whatsoever, either civil, military, or naval, the Government enters into a positive contract with the man appointed ; it is always positively stated, or tacitly understood, what shall be the services performed ; more cannot be expected with justice, and, if exacted, the breach of contract on the part of the Government is so hard felt, that its service loses all respect, and the officers, whom their situation forces to submit to it, lose their respectability among their fellow-citizens, their own self-esteem, and all attachment to the Government.

21. There are also such works needed by the Government which cannot be made otherwise than by positive contract, or which it is not even proper for a person to undertake otherwise but upon contract ; in that case, it is evident that the Government, and the person contracting with it, stand exactly level, upon an equal footing, as any two citizens would in any case of common life : every stipulation is equally binding on both sides ; the Government must grant all that is stipulated in the detailed arrangements, as well as what relates to compensation ; and even it is proper, nay, necessary, that the Government give to every part the most liberal explanation ; it will always be to the advantage of the work, by tacitly prescribing to the contracting individual equal liberality on his part ; besides that, as it must be supposed that the contracting individual has used the proper delicacy of expression towards the Government in his stipulations, equal delicacy is to be returned in the application of these expressions.

22. The principles of a republican Government prescribe that the high offices, forming the first class quoted, be not attached to the persons, but changing according to regular laws ; the details how that is to be done in the most advantageous manner, would be too long to discuss here, and have, besides, a great deal that is local and individual to every country, and even different parts of the same country.

23. But for all offices of the second class, the case is different entirely ; the removal of an officer rendering good services in the second class of offices, and without cause of dissatisfaction, (under, suppose, an idea of rotation in office, like in the offices of the first class,) can never be done without real damage to the regular course of business ; it is, therefore, highly uneconomical. It has a greater disadvantage still, namely, the apprehension of the officer of being removed from his situation unexpectedly and unpre-

pared, and cuts off, in the most direct and full manner, all free intercourse with his superior, to the evident detriment of the public business.

24. As for the amount of compensation for all the officers of the second class, who are, as stated, to ground their whole living, or at least the principal part of it, upon this compensation, it must be deeply impressed in a republican Government, wishing to remain republican, that the compensations must all be in due proportion liberal. It may fit to a king, an aspirant at despotism, to have a number of low and menial dependants at a cheap rate, just as well as ministers at high pay; but the republican Government must keep up its respectability in all its appointments, and considering the class of society in which, or over which, it places an officer, it must place that officer in his proper rank to secure his respectability, otherwise the officer is put in the impossibility to execute his duty with propriety; (as, for instance, that the most of the custom-house officers, in the main ports, are now in pay below the habitual earnings of a cartman, while their position obliges them often to try to take the command over them, which, of course, becomes difficult for them with such men feeling their oats, as the expression is.)

25. The bad effect of the monarchical habits of employing cheap menial officers, is the most strongly exemplified by the custom-house officers on the Rhine, Holland, France, England, of which examples are to superabundance; (when three officers board a barge, ask one French crown toll and three for themselves; when upon baggage, the clerk's fees being considered regular without a duty being paid; when in France the word "gapien" means equally a custom-house officer and a good-for-nothing fellow, &c. &c.) on this point this country has always been a very favorable comparison, as the custom-house business was transacted hitherto honestly; but if once spoiled, once the respectable officer driven out, and the door opened to connivance with merchants, revenue and smuggling will have a widely different proportion. The example of the custom houses is here adduced, both because they are just now in danger, and because in this part the comparison with other countries lies the nearest and most apparent.

26. It must yet be observed, that the patronage in appointments, in reference to its influence upon elections, of which much complaint is made, does not depend upon the amount of emoluments thus distributed, but is entirely regulated by the number of appointments; for, a small salary purchases a cheap vote, just as well as a large one under equal venality, and all votes count equal; the reduction of salaries, and necessarily consequent increase of numbers, gives the effect evident, and above all the unfortunate law limiting the duration of offices, so as to place every one at least once, often twice, at the disposal of the executive in each administration, render it actually a powerful engine of which any king might be jealous; it enlists the incumbent by fear, and all the applicants by expectation.

27. Not only for this special purpose, but also for many others, it is necessary to render men employed in a republican Government more independent in their public situation; the attachment to the business, the regularity which habit and time can alone establish, with proper knowledge of the duties of an office, render an officer more efficient, and keep up a regularity and system, on which much of the respectability of an office depends. The low salaries, which of course only such people accept as can do no better, will always purchase low, personal attachment, never good services for a republic, which must be a general Government, free from personal devotion.

Such a course would soon collect around the distributors of office a numerous low class, ready to do any thing, and leadable without principles, as the French republic has experienced at a certain time, with the most unfortunate consequences.

28. It has appeared proper to dwell more upon the consequences of an unfortunate management of the second class of public offices than of those of the first class, because it rather can be the object of legislative action, and can be less known in its details and ramification of influence. To remedy the evils that may be apprehended in the first class, would need treating the principles of constitutional questions, which was not the intention here.

F. R. HASSLER.

WASHINGTON CITY, *January 28, 1836.*

A 9.

WASHINGTON CITY,
March 27, 1836.

MOST HONORED SIR: This morning I received from the Secretary of the Navy the information that the coast survey documents would be transferred to you this day.

As it is urgent that the arrangements essential for the progress of the work be made as soon as possible, as I stated also to the Secretary of the Navy, I take the liberty to address you immediately.

Your personal acquaintance with the history of the work, since 1832, when it was taken up the second time, and your perusal of the documents, from as well before as since that period, will make it evident to you why I must in propriety omit all those subjects contained in the same letter, which communicated to me the transfer under the form in which they appear there. The circumstances dictate to me to treat the subject from its principles and origin, leaving out a whole volume of correspondence, which has cost to the country a great loss in the otherwise possible and proper advancement of the work, and to me more money than I am able to lose; besides a loss of health and time, which I would with great pleasure have applied to the best advantage of the works under my charge.

The law of Congress of 1807, which is renewed by that of 1832, directs an accurate survey of the coast and shoals of the United States to be made under the direction of the President, thereby giving it entirely in his hands, expressly dispensing with detailed legislation upon the subject, which was well known to be of no probable advantage. It was therefore also readily admitted at both epochs, when the work was given under my charge, that the work should be done under a contract, as so many other works of the Government, and not in the form of an office.

Thence arose the stipulations which were always fully understood in the Treasury Department, where they were made; but not so in the Navy Department; and which now will certainly be followed again in future, as they have proved proper and adequate when taken as guides.

The other subjects to be decided now, are therefore those relating to the compensation and general standing of the persons engaged in the different parts of the coast survey works, and that of my own allowance for the expenditures, which unavoidably fall upon me, and have hitherto brought me into losses far above my means to bear.

1st. Relating to the per centage to be allowed to the accounting officer of the coast survey, upon the expenditures going through his responsibility, it has, as well in 1816 as in 1832, been considered as proper and unavoidable to enable such an officer to perform his duties ; and it is of the highest importance that I should be enabled to select for that duty the best obtainable assistance. I persuaded, therefore, Captain W. H. Swift, of the topographical engineers, to accept this situation, under the tenor of the stipulations, fixed already some time before by the letter of the Treasury Department of the 12th of April, 1833, (printed docs., vol. 1, page 103 ;) so that he, in fact, accepted it under these stipulations. My choice has proved of the greatest benefit to the work ; indeed, it required the practical acquaintance which he has in fitting out surveying parties, and managing the economical concerns of them, to fulfil the duties which he performed, with that propriety and economical advantage to the work and the Government which he has made proof of during the whole time.

I take, therefore, the liberty to request that you will please to direct that the per centage upon the expenditures for the coast survey, stipulated by said letter of 12th of April, 1833, shall be allowed to him by the accounting officers, as it has been before the stoppage of the Fourth Auditor, from the time of that stoppage and henceforth.

2d. The assistants taken from the army or the navy have, during the first works in the coast survey, already been considered : so that their services in that work are to be reckoned for the land officers as *field service*, and for the naval officers as *sea service*, in whatever manner or rank they may be engaged in the work, as their position in either situation is equally of interest, and equally indispensable for their future independent application of the information they acquire. The positive declaration of this principle now, is highly desirable ; and the President, in whose authority it lies to decide it, will certainly not be averse thus favorably to consider well-deserving officers. It would be highly detrimental to the work, and to these officers and their future utility, if, in order not to lose their rank in the army or navy, they were obliged to leave before proper time for other services. Their stay in the work must be a practical course of studies of all the different parts necessarily occurring in it. It can, in fact, even not be expected that the work should progress properly, if a constant change of new assistants should come in, unacquainted with the preceding works upon which they must build theirs. By such a course, the work would become a school of beginners, varied, unequal, and unavoidably bearing the traces of incoherence. As for the additional allowance of expenditures, I believe you cannot otherwise but find it as just as it has been found by the Presidents and Secretaries of the Treasury, who have stipulated it heretofore. I take, therefore, the liberty to request upon that point merely, that you will allow me to state the amount of it in the different cases, as they may occur ; because the extra expenses which they are to compensate will vary with the cases.

3d. There is another class of assistants, equally indispensable, which I have been able to supply hitherto only temporarily, and of which it will be of great advantage to make steady appointments. First, the chief mechanician for the work. Without such a man, we would not be able to keep the instruments in serviceable order, without sending them to Europe ; which evidently is too much cost and delay, while with such a man all can be done appropriately under my direction. Mr. William Wurdemann has since

some time acted as such: he is a very able man in his line, and I propose therefore that he be appointed regularly, with a compensation of \$800 per annum, and his board. Secondly, a clerk for the multiplicity of writing of all kinds, that the work necessarily produces; the making duplicates of the journal; results of calculations, &c. It is absolutely necessary to have a man on purpose; the interruption which it would cause in the works of the assistants would be detrimental to the work, and often leave me without help in important moments. I have, last winter, employed Mr. Samuel Hein, as such, under promise of making him a steady appointment. I therefore take the liberty now to propose that he may be appointed, with a regular compensation of \$800 per annum, and board.

I must besides request that you would be so good as to allow me to appoint, besides the mere laborers, under assistants, whom we are so constantly in need of, under compensations at an annual rate of from \$500 to \$700, and board, according to the cases. Such arrangements and appointments would always be made by the combination of the accounting officer and myself, in the manner best adapted to circumstances. If it was necessary always to recur to the department for special appointments, the occasion would generally be lost to take the best advantage for the work, as circumstances have proved to us. The board is added in all these cases; because if they were to board themselves, it would complicate the field and camp arrangements so as to consume time, which it is absolutely necessary to economize very much.

4th. In relation to my own allowance for expenditure, the diminution of it, from what it has been rated at in 1816, it was evident at the beginning of the work, in 1832, that it would prove insufficient, on account of the well known augmentation of the price of living, which takes place in all countries, as they advance in civilization, and which is well known to have been very rapid in this country. My situation, at the last time, in the works of the weights and measures, could be considered steady at the \$3,000 stipulated for it. But the President's spontaneous friendly proposition to me, of committing the coast survey work to my charge, joined to my inclination to take up again the exertions which I had formerly bestowed upon the work, decided me so much the rather to do all I could for it, as I saw by the inadmissible plans, then divulged, that the work of the coast survey, and its exigencies and consequences, were more unknown in the department than I had thought. My desire to prevent the full discomfiture of a work of so much real value and interest for the nation, prompted me to make new sacrifices, additional to those I had already suffered in my first works, not doubting that they would be only of short duration. It appeared to me necessary to show, first, what the work, in its proper form and order, would be, to lead to the proper considerations which would secure my position. I therefore contented myself with the reserve in my letter of acceptance of 12th of August, 1832, (printed documents, vol. 1, page 87,) *that this could be easily modified*, considering that the Government could never wish to put me to any actual loss of money. After having repeatedly represented my case, particularly last year, I believe now, under the aspect of what has already been the result of my exertions hitherto, as well in the coast survey as in the weights and measures, I dare take the liberty to renew my instances for the augmentation of this allowance for my personal expenditures to the sum of \$3,000, which these expenses have hitherto annually exacted from me, and that, by dating the increase from the 2d Au-

gust, 1832, I may be disencumbered from the economical embarrassment which these circumstances have produced, as the result of it has been to the public benefit, through my exertions above my means; the further progress of the two works will, I am sure, fully justify me.

Not to repeat myself too much, I take the liberty to refer to the various documents which treat the subject, as in the printed documents, vol. 1, pages 120, 155, and vol. 2, pages 68, 96, 126, 129, 133, 153, 154, among which I must specially refer to my letter to you of 21st May, 1835, where I stated in section 4, *I would try still that year* to make out with the augmentation of that allowance of \$2,000, by modifications in my arrangements; (printed documents, vol. 2, page 133.) These modifications consisted in taking advantage of the advanced state in which I had placed that part of the work which falls upon me personally, and of the non-reception of the great theodolite, indispensable for the main triangulation, not to go into field work myself, and to limit my task to the directions of the secondary triangulation, and the plane table and sounding parties, for which my task required my presence here; by which means also, I was enabled to attend simultaneously to the weights and measures, as stated to you before, going out early in the fall to meet my assistants, for various arrangements and works. Notwithstanding that arrangement, previous impending circumstances increased my embarrassments even last year.

This year the arrival of the great theodolite from London, the absolute necessity of filling up and continuing the main triangulation with it, positively prohibit this remedy for my expenditures; and I must, after having completely exhausted my private means, present in full the real state of my situation, and ask that you will be so good as to remedy it; the authority for it, as well as the means and manner of doing it, being entirely in your power, while my means are not able to lead me a step further.

Without presuming to dictate the manner in which the compensation may be arranged, which will enable me to continue my services to the Government for the two works to which I intended to devote myself, I will take the liberty to suggest here the mode which appears to me would reach the aim in the simplest manner, and in the easiest form of compatibility, thus:

1st. That I should receive for the weight and measure works the annual allowance of \$1,500, counted from 2d August, 1832, to the end of the present quarter.

2d. That from this amount be deducted the \$500 which I received last year, in four quarterly payments, and that the accounts charged to me, from the coast survey upon that, be admitted in the next accounts of the accounting officer for that work, in deduction of so much thereof.

3d. That from the 1st of next month, my full compensation for my work shall be \$3,000, for compensation, (as before,) and \$3,000 as allowance for personal expenditures, as regulated by the stipulations of the articles of agreement in 1832, which were confirmed by the letter of the Secretary of the Treasury of 9th August, 1832. This amount then will be no more than the habitual compensation of a chief engineer of a canal or rail-road, where all expenses and exigencies are by no means comparable to those of the coast survey; it is, therefore, by no means an unusual compensation.

You know that I ought absolutely to go off to New York for the weight arrived there with the great theodolite, and also to take arrangements for fitting up that instrument for use. I must, on that account, take the liberty to request your decision, in order that I may have the means to execute that as soon as possible.

It has been a very painful task for me to recur here again to the subject of the 4th article of this letter, but I am, in this respect, under the absolute command of the law of necessity. I have no doubt, that, with your present acquaintance with the works under my charge, their hearings and consequences, and my manner of acting in them, you will decide it by a fully favorable answer; that I may devote myself to my task with that freedom of mind and position which its adequate execution indispensably requires, and which I am so willing to bestow upon it, by a fully exclusive devotion to my charge, which I hope you will make possible to me.

I have the honor to be,

With perfect respect and esteem, most honored sir,

Your obedient servant,

F. R. HASSLER.

Hon. LEVI WOODBURY,

Secretary of the Treasury.

B 1.

WASHINGTON CITY, July 30, 1836.

MOST HONORED SIR :

1. Your long silence since the decision of the Committee on Commerce, upon the subjects of the coast survey, which you had referred to the same, had of course authorized my belief that you were fully satisfied with its decision, and would execute it as soon as your now crowded occupations would allow, which it was not proper for me to interrupt, particularly as I made the best use of the interval, by applying it to the finishing of standard weights.

2. It is, therefore, with painful feelings, that I find myself compelled to write again as long a letter to you, as your last of the 29th July forces me to do. Your proposition to bring before Congress questions upon the coast survey, which the original law has fully decided, obliges me to make out of this letter a document, treating the subject also in such a manner as to furnish Congress with the proper information; but it might be misled, as in 1818, into a measure destructive of this very valuable work, and leading into discredit and extravagant unproductive expenses, as then.

3. I shall circulate your letter to my assistants, to get their expression upon what regards them, that I may limit this to what relates to me, and to the work in general.

4. As to the legality of the statement of the committee, (and myself,) that the law gives so full authority as to need no laws upon particular details, I will quote to you two more authorities of weight.

When I brought Mr. Gallatin, in New York, to see the large theodolite lately arrived, he, before the instrument, in presence of some assistants and other gentlemen, said, "This originated with me. I asked simply for a law to make an *accurate survey* of the coast, entering into no details, so as to have full authority. All that a magistrate has to do, in such cases, is to find a man to whom he can intrust the execution of the work, and then let him do it. I made six to twelve circulars, and got answers. By them I found I had my man." In so saying, touching me on the shoulder.

Mr. Edward Livingston, already in 1832, expressed himself fully to me

that *the President* had full power ; that the execution of the law was attached to no department, and could be given in commission (as I have stated,) so that the person under whom it stands acts not as head of a department, but specially charged, and, therefore, also personally responsible. Thence it came that the President gave it at first in commission to Mr. Livingston and Mr. McLane, jointly, as you will recollect. In general, I have found the same opinion upon the law and its effect, among all the intelligent and well informed men of the country.

5. Your reference to the committee was, as you know well, not in the form habitual to call forth a law. It appeared to me, from your expressions, that even you did not consider it so, but in either one of the two following views : either as a call for advice from the committee, which implied, of course, the tacit acknowledgment that it would be followed ; or as a kind of arbitration between your opinion and mine, upon the subjects in question ; as you stated to me yourself, that if I would not abide by what you had then proposed, (which would be impossible,) it would go to the Committee on Commerce ; to which I willingly submitted. Also this implied that we were both equally bound to abide by the arbitration award thus called for, which the committee gave and sent to you. As thus binding, in either case, I conceive yet ; and certainly also the committee and other members of Congress considered its decision. Therefore, it took the rarely used mode of each member signing personally ; and more could not be done at the end of the session, as I know.

6. Advices and reports of committees followed, though they have not passed Congress. I know well, to be habitual with you in your department, as in the others, it is a very proper mode not to embarrass the transaction of business by useless formalities. There is, therefore, not any reason which could, in the slightest degree, invalidate the binding decision of the Committee on Commerce, upon whose report, at all events, Congress would act at any time. Besides that, no rule of departments whatever (as I have heretofore stated) is applicable to the coast survey arrangement. It rests upon a contract between the Government and myself, which it is just the question to put upon the proper footing, which I have immediately, in 1832, reserved to claims, after experience would have taught the propriety of my first propositions, which the investigation of the Committee on Commerce has now laid clear before the public.

7. You are certainly yourself aware of the interest which the great public utility of both the coast survey and the weight and measure works have for the country at large, and many classes of citizens in particular. The proof of it is fully administered by the actions of Congress of last winter, upon the appropriation for the first, and the extension of the latter : in fact, it cannot be otherwise in the present state of the country. The state of civilization of it calls loud for both ; so much, that if needed, petitions to thousands of signatures would come in for it, as has been already offered, in case there should be any danger of these works being distracted from their present progress.

The fallacious idea of economy, in keeping a few thousand dollars in a treasury complaining of plethora, to let works of great public value and utility perish, is not in the liberal genius of the nation, and those men whose character and knowledge indicate them as proper arbiters in the case.

8. Under such circumstances, I have not the least hesitation to accede

to any proposition to bring the subject before any assembly of decent men of authority, Congress, Senate, &c., provided they will, like the Committee on Commerce did, investigate the subject. The printed documents furnish abundantly the means to do it. The decision will always be similar to what you have on hand from the Committee on Commerce; still the delay unavoidable by it, I must declare as costly in work and money; and that if, by unfortunate influence, a result like in 1818 should be produced, I can only wash my hands in innocence, as every man investigating the subject will find that I have never been lack of the utmost efforts, and even many sacrifices for the public good, in the works in which this public good was intrusted to my care and exertions, (as has been acknowledged to me by members of Congress.) In part proof of my sacrifices, I join here the enumeration of them in a general form.

9. You state that you do not feel authorized to take from the coast survey appropriation of 1836 the amount of my arrear pay, decreed by the committee. You find in my letter of March 27, that, well aware as I am of the forms and manners of the administration since 1807, I proposed by the two first items, stated under article 4, how this could be easiest done, (which I again urge:) that these arrears should be taken from the unlimited custom-home funds, as pay for the weights and measures. I am in this supported by your own action in the case, when last summer you made payments for objects directly belonging to the coast survey from the very same funds. The weight and measure work will at all events one day or other be paid, though an article in the letter of the Treasury Department, of 9th August, 1832, says it shall be done without pay.

10. You have completely left out of consideration the question of the per centage of the accounting officer, and, in general, the whole of the articles 1, 2, and 3, of my letter of 27th March, as I believe to have sufficiently stated the importance of the favorable decision upon these questions, also approved by the committee. I will here only urge the absolute necessity of it, and hope you will not fail to consider it.

The accounting officer acts at present temporarily, out of mere friendship for me, and on my earnest solicitations for it. How unfortunately his retiring would act, I have sufficiently stated. The projected bill of the Committee of Ways and Means, No. 106, which would have almost stopped the motion of the public administration, having found its due death already in the committee, all former temporary restrictions are dead, and there is not any legal impediment to any of the measures I proposed, in relation to either accounting officer, or other officers as assistants. They will one day or other be supported in their legal title of the letter of the Treasury Department often quoted.

11. You appear, in some measure, blaming me as not having called upon you in relation to the appointment of more topographical parties. Upon this, I must remark, that, by addressing you instantly after the transfer of the coast survey to the Treasury Department, all the demands which were required to be acted upon, which comprised, evidently, also this, I showed my pressing anxiety for an immediate decision; I urged and presented all the means to foreclose further damage at once. It appeared to me that the necessity of an immediate favorable answer was evident, and I pressed my return from New York, where my personal presence was just required, as the letters upon that subject show. When, on my return, I found dispositions which could decidedly lead to no other result than to cripple or stop

the work, how could I, as an honest man, attempt to displace any man from any situation, to engage him in another which was in so evident danger and uncertainty? Also, your last letter does not convey any means to me to look out even for such assistance, as all questions relating to appointments are made doubtful by it. It must well be understood, that the men capable to render efficient services in the coast survey, are as scarce as the pretenders for it are numerous; and that, particularly in the present moment, when so many engineer officers leave the public service to engage in rail-roads, (so that the Military Academy becomes in fact a rail-road academy,) who pay double and triple of what you will allow, men of sufficient intellectual means and acquirements to serve in the coast survey cannot be found unemployed, nor be engaged for any compensation similar to what you seem willing to allow.

12. You consider the most liberal course for you, the granting of \$1,500 to me for this year, conditional to the approbation of Congress next winter. Though I have no reason to doubt of this favorable decision of Congress, I am sorry to be obliged to differ with you upon this liberality, as I see in it nothing but the offer of a loan of public money upon my private responsibility; thereby the incurring of a new debt to be laden upon my family, which I have positively refused to do, and must therefore decline, also, under the form you give to it. If you are not inclined to find yourself authorized to give this additional amount full and free for this year at least, from an appropriation which shares as well the satisfaction with the work, as the liberal dispositions for its proper future success, the work must abide by your personal decision, and I am fully exculpated for not doing more than is possible with the means at my disposal. (*Ultra passe uno obligetur*, is even in law.)

13. My report, next fall, will show the liberal readiness to prevent misfortunes to the work, as well in what regards me, as I hope also my assistants; for I really believe we are all equally bent upon promoting the public good, even in spite of impediments; the result will show it, with sufficient reasons to defend all our conduct, and make my justification as full as the Committee on Commerce has found it upon investigation of my conduct hitherto. I am sorry that it will present on one side a liberal disposition of Congress, and of all the persons engaged in the actual work, in contrast with the impediments made insurmountable out of mere trifles, without due regard to the public interest in the work, and which have already cost far more money's worth than the immediate full allowances asked in my letter of 27th March would have cost in two years. It would be useless to stretch out this letter into details upon this point, as you disregard the notorious fact of the far greater pay which men, capable to serve in the coast survey, necessarily deserve by their much greater knowledge, exertions, and expenses, in comparison with other works, employing similar, though very far inferior talents, which must ultimately necessitate them away from the coast survey; and as you refuse to my statements that credit and influence which truth ought to have everywhere, and has actually obtained from the Committee on Commerce, whose investigation, and the testimony grounded upon it, is the only satisfaction which I have as yet earned from public authority for my exertions in the coast survey, besides the satisfaction which I always found in the President, though he unfortunately always afterwards gave way to reports made without the proper investigation, knowledge, and considerations of the real state of things and the public good.

14. The task in which I have been engaged since 1807, so much that I have been, in some measure, considered by the public as identified with it, obliges me, by the honorable feelings to which I consider myself bound towards the public, in return for the good opinion shown to me, to stem also now the tendency of the state of things to a full interruption, (notwithstanding the opportunity which I have to step into another similar, and so nominally less, still, in reality, of greater economical benefit.) So I may here state to you the plan which I shall follow, as most beneficial to the public interest, as far as it can be forwarded by me, and which, in my opinion, will be considered really liberal, as follows:

15. As soon as I shall have finished the adjustment of the fifty pound weights, I will pack up for going to New York, and send there those persons from here whose assistance I shall be in need of, with the necessary effects that are here. There I will finish the arrangements required for the proper putting in use, securing, and fitting up at the stations, of the great theodolite, and take the necessary measures for procuring a proper place of deposite for our instruments and equipments. I should hope, during the time I do that, to receive from you dispositions of a nature more adapted to the benefit of the work, that I may be enabled to prepare in full for the actual field work.

16. Thence I will proceed to the station of West Hills, in the proximity, where I can lodge with a farmer; there I shall try the new instrument, and the heliotropes, and make several observations required there. Perhaps I may call some assistants to me, if it can be done without too much interrupting their work. During that time, at least, if not earlier, I should hope to receive such dispositions from you, as will enable me to proceed further to the other stations, and continue the work as it ought to be done; (I will from there also direct the printing of the third volume of documents of the coast survey, that it may be laid up in Congress with my report, if you should not previously decide to follow the conclusions of the Committee on Commerce.) But as this would require my new equipment, and numerous other expenses, you may easily conceive that my exertions in that direction must stop there, unless you furnish the means in full, according to the decision of the Committee on Commerce; the refusal of which would, therefore, necessarily put an end to my field work in that stage, (*volens volens*.) and oblige me to return to the weight and measure work here, when by that time abundance of materials will be prepared for my work of adjustment, that I may properly answer that part of my task. This will be no otherwise than if bad weather having occurred, precluding coast survey work, I had judiciously made use of it under the roof of the weight and measure establishment; and I may thus there await the decision of Congress, as you desire.

17. If I should be allowed to expect more favorable dispositions for the work, I would, from New York, or West Hills, write to you, to request various things which the future progress of the work indispensably requires, but which it would be as idle even now to quote, in the state in which your letter has placed the whole situation of the work, as they would be useless in case of a change in the proper, useful, and honorable organization which it has always been my exertion and intention to give to the work.

18. After having thus treated all the subjects of your last letter, allow me the liberty to request that you would please to reconsider, once more, the whole subject, without regard to your last letter; weigh the propositions contain-

ed and explained in my letters of 27th March, 30th April, and 28th July; of which so many subjects of importance are not touched in your last letter, that I am induced to believe much of their contents had not been present to your mind when writing it. Please to compare them with the conclusions to which the Committee on Commerce has, by investigation, arrived, upon the proper course to be pursued, for the public benefit, in the two works under my charge; I cannot but think that such a more minute, free examination and comparison, would completely dispel your scruples upon legal authorization, and bring you to the full assent to the committee's decision, as congenial to the wants of the country, and the desire of its citizens as to the requisites of the work and to its legal standing.

19. A very severe falling back in sickness on the very evening when I sent you my last letter, the weakness under which I suffer still, and the time required to write this letter, have of course prevented my intended work of adjustment of weights.

20. I shall attend to the delivery and forwarding of the standard weights, as soon as they shall be done; but indulgence, as to time, will be necessitated by the state of my health, which has cut off much of my power of exertions; a state which is brought upon me entirely by the perplexed situation in which I am placed in the very business on which I bestow the most strenuous exertions and all my strength. My corporal constitution appears not to reach up to my mental activity; however, since I have withstood the last attack, I have hopes of full recovery.

I have the honor to be,

With perfect respect and esteem,

Most honored sir,

Your obedient servant,

F. R. HASSLER.

HON. LEVI WOODBURY,

Secretary of the Treasury, Washington City.

B. 2.

TREASURY DEPARTMENT,

August 2, 1836.

SIR: I have perused the contents of your communication of the 30th ultimo, with much pain and regret. A minute description of your objections and complaints would not, in my opinion, be at this time any more useful than agreeable. But it is proper for me to state, with distinctness, that I do not feel justified, under the views entertained by the President, in making any offers essentially different from the existing contract and allowances, except those offers contained in my letter of the 29th ultimo.

You do not seem to advert to the fact that the President, under whose direction you justly remark the survey of the coast is placed by law, and not under the direction of any department, has never delegated to any department the authority to fix or alter your compensation, or that of your assistants, without his approbation in each particular. The changes made before last March, as well as the original sums fixed, were by his direction or sanction; and the refusal to make the changes desired by you during the late session of Congress, and reference of those changes to that body, for its approbation, were by his express orders.

The committee were, as usual, only the organ through which the subject was designed to be presented to Congress. The recommendation addressed to this department, by the members of the Committee on Commerce of the House of Representatives, in reply, (without any legislation by Congress,) was consequently submitted to the President for his decision; this department alone not having now, or ever heretofore, any power to decide on such recommendations independent of him. He declined to adopt the mere recommendations of a committee, though highly respectable, unless approved by Congress; and expressed a determination to have the whole subject of the proposed changes referred again to Congress at the next session for its legislation, not being willing to make such extensive and important alterations without the sanction of Congress itself. The business must, therefore, remain as it now is, in relation to those changes, unless you are willing to receive the additional allowances proposed by me, for 1836, in order to remove, as far as possible, by me alone, your present difficulties, and to receive said allowances subject to the future approbation of Congress; or, if you prefer it, of the President on his return to this city, provided he is himself then willing to enter again on the subject of a change of compensation for 1836, (except in the manner heretofore proposed by me, conditional on the future approbation of Congress.) Under these circumstances, I regret that it is not competent for me alone, under my present powers, to make any proposals more satisfactory to you. But it will afford me great pleasure to submit your recent communication to the consideration of the President on his return to this city, if you desire it, and to take thereon any further direction he may be pleased to give.

In respect to the commissions or per centage desired for the disbursing officer of the survey, who is an officer of the army, and which you appear to suppose has escaped my observation, you will see the objections stated to that allowance, or any additional pay either to officers of the army or navy, engaged in the work (under the present laws of Congress, and without a new act of that body,) in the correspondence before had with you by the Navy Department, and in my report to the President of the 13th of April last, and which I did not deem it necessary to repeat in my late reply. But if, in consequence of the omission by Congress at the last session to re-enact the same provisions made at the previous one, the War Department shall hereafter allow its officers a commission on their disbursements, there will be no objection here to make an allowance for 1836, to Capt. Swift, similar to that granted to him before the legislation of Congress in 1834 and 1835.

In respect to any other officers of the army, their claims for future additional allowances will be considered further, whenever made by any of them, and the reasons for them in each case specified subject to the limitation before named. The proposal you now make for me to take from the accruing revenue of 1836, rather than from the appropriation for said year, and pay you more for services performed in previous years as in 1832 '33 '34, &c. than was in those years paid or promised by my predecessors, has not, as a restrospective allowance, the sanction of the President, according to what was intimated in my former letter. It was reported against last April, by this department; and the reasons were detailed against its admissibility, unless Congress should think proper, under all the circumstances, to authorize it as equitable, though not due in point of law. Hence it must be left to the action of Congress.

In the mean time, I trust that the progress of both the coast survey and the

weights and measures will receive every attention which your existing engagements may require, and the lamented state of your health permit; and that Congress, to which the President proposes to refer the whole subject of compensation and allowances at its next session, if it cannot otherwise be arranged on his return, will make such detailed and specific provisions in relation to them, as to obviate any future difficulty, whether concerning the past or the future. With the most anxious desire to aid in the successful promotion and termination of both the survey and the weights and measures, I consented, once in the Navy Department, and again in the Treasury Department, to take charge of the former, in order to relieve others from the trouble experienced in connexion with it. But, in closing this communication, I feel bound, in frankness, to apprise you, that the President will, on his return, be requested to excuse the head of this department from further supervision of the subject of the coast survey, and to devolve the care of it again either on the Navy Department, or some board of officers with ample powers and greater leisure to supervise a work so important in itself, and so fruitful in difficulties and embarrassments.

I am, very respectfully,

Your obedient servant,

LEVI WOODBURY,

Secretary of the Tre

F. R. HASSLER, Esq.,

Superintendent of the Coast Survey, Washington.

[*Endorsement on the above.*]

The within proposition of the Secretary of the Treasury to Mr. Hassler, if accepted by him, will be approved by the President; if not, then he must wait the decision of Congress.

A. J.

B 3.

WASHINGTON CITY, July 28, 1836.

MOST HONORED SIR: With the present, I have the pleasure to inform you that I have completed six full sets of standard weights, which will, therefore, furnish the principal custom-houses of the sea-shore, presenting you one set as a sample. Please to give me directions upon the delivery of the others to such persons as you may deem proper.

Each set is contained in two boxes, properly secured, with fittings for each weight, and fastenings for the covers; all in such a manner that they shall be preserved from all damage, either in travelling or otherwise. It is of course necessary to place each set in a strong and properly fitted up packing-box.

It will, however, be required to add the proper instruction, that the weights shall never be touched with the hands, but always by means of the forks and hooks, which are for that purpose enclosed in the boxes.

It will be necessary to direct the collectors to place the standards under the special charge of an officer, who shall never let them from under his

care, or be used in any way without his being present; and that it shall be positively *prohibited* that they shall leave the custom-house for making comparisons, or on any other account; but that, in necessary cases, the weights or measures, &c. to be tried be brought to the place of the custom-house where the standards are deposited.

The one box contains :

One 1 pound troy.	One 4 pound avoirdupois.
One 1 pound avoirdupois.	One 5 pound do.
One 2 do. do.	One 10 do. do.
One 3 do. do.	One 20 do. do.

The second box contains:

One 25 pound avoirdupois.	One 50 do. do.
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I did all in my power to accelerate these works; and if I had enjoyed health, like in former times, I would have had the pleasure to present this to you much earlier; but my very low state of health, since several months, did not allow me to work half the time which I was formerly used to do, and that with straining all exertions, which is at any rate required in the accurate adjustment of standards. I am now yet very feeble, not always able to work, and my health is precarious.

There are, besides these, upwards of three hundred weights worked out for future adjustment; but as they do not yet form full sets, they will be adjusted fully, at such times as it will be possible to form full sets. There are, also, 13 yards in the same state of forwardness, and brought near final adjustment. So that it will be possible, in the next delivery of standards which I shall be able to make, to furnish also yards, to join to the weights now delivered, as well as to those that will be delivered with them.

Brass plates have again been sent to New York, to be laminated, for the construction of capacity measures, and some smaller capacity measures are begun. This part will always occasion some delay, because of the necessity of sending the cast plates at a distance for lamination; a kind of work which we could not establish here ourselves, without water or steam power.

The operations for reducing zinc have been ended, on account of our having produced a sufficient quantity for the standards ordered at present. It became, therefore, an object of economy, in the time and organization of the actual construction of standards, to move the casting establishment close to the house where the mechanical parts of the work are performed: this has been done, and is now in fully successful operation. There have also been engaged two more workmen, and one more caster; the works will, therefore, now proceed still more rapidly.

The building at the arsenal has now become useless for us; and as it might serve to the arsenal, and most likely will be used by that establishment, it might, perhaps, be possible to make a cession of it to the War Department, against a compensation, as might be estimated, and the proceeds could be used like other funds, for the weight and measure establishment.

Of the coast survey work, the following is the state :

All the secondary triangulation and topographical parties, heretofore established, are in the field, actively engaged, (as much as the extremely unfavorable weather has allowed them,) at filling up the details within the main triangulation which I executed in the former years. But there is

still more work laid out than the present number of assistants can execute this year.

I had already, in my report and estimate upon the appropriation, mentioned that it would be of great interest and economy that the whole of the topographical part over which the main triangulation extends could have been finished this year, as I had planned; but the authorization which I requested in my letter of the 27th of March having not as yet been notified to me, I was hitherto put under the necessity of suspending my action for the increase of the number of those parties.

Since the arrival of the great theodolite for the main triangulation, the stand and motion works, which were necessary to fit it up for services in the field, have been completed here, under my direction. Those arrangements which are required for its safe movement, and its protection upon the station points, it will then be necessary to make in New York.

All our barometers (so indispensable for the mixed astronomical and geodetical observations) having been broken by the hail-storm on Bald hill, I invented a new form for them, upon which six were constructed here by my immediate direction, and partly personal work, which will not only be more secure than those usually obtained from England, but they will, besides, be all standard barometers, while those received from England are generally only adjusted by comparison.

I have, besides, been attending to calculations of elements for the work in general.

I am thus prepared to go to the field work of the coast survey, (the importance of which I have stated heretofore,) as soon as I shall have received the arrears of payment from the 2d August, 1832, to the present time, which has been decided upon by the Committee on Commerce of Congress, to whose decision you referred the subjects of my letter of 27th March. This amount is indispensable for me to procure my equipments and necessary stores for the campaign, and to pay the debts which I have been obliged to contract the former years for these and similar objects, &c. For the future, the amount of compensation and allowance of \$6,000, also decided upon by the committee, will, I hope, at least secure me against the necessity of contracting further debts.

When, the last Saturday of the Congress session, I went to the Hall to get information of what would be the decision upon your reference to the Committee on Commerce, I was very happy to hear the good dispositions and the approximate tenor of the committee's decision; if there had been time yet to call for the opinion of the Committee on Commerce of the Senate, I was informed that they would have signed the same; nay, some members of Congress told me that the majority of both Houses would sign it, if needed; but the opinion was general, that the letter addressed to you by the committee, under the signature of all its members, would fully suffice to insure the aim of it. This happy disposition of Congress, so fully in unison with what I have heard upon the same subject, among the enlightened public, in the country at large, has given me great satisfaction, which you will undoubtedly have equally shared, and which will, therefore, soon be completed, by your giving full effect to the decision of the committee, which may well be considered as the decision of Congress itself, who would at any time certainly confirm it in full.

The President, with whom I spoke upon the letter of the committee, the day before his departure, had no objection to its tenor, and told me that

you and I would manage it together. I know, besides, from his expressions towards friends, that he considered the works under my charge as of the most important ones going on in the country, and that he was always willing that the emoluments of myself and assistants should be such as to furnish a fair compensation, which, it is well known, those which have been hitherto received proved not to be.

In relation to the assistants from the army, I must observe, that it is necessary, to prevent the stopping of the functions of an accounting officer, by making the allowance of the per centage, and for the allowances of the others, to take at least some temporary measures. There is not the least doubt but that the *decided title* which they have by the letter of the Secretary of the Treasury, often quoted, will in any case warrant your decision in their favor, and no doubt it would be considered so by Congress, as it has already been by the committee; while for the destruction or crippling of the work, such trifling money considerations could never be considered a sufficient reason.

The *lieutenants* of the navy are the only officers who can make out in the coast survey with their ordinary appointment, and whose position it appears cannot be altered since the last navy bill. The midshipmen acting on land are fully in the category of land officers, and, therefore, should receive their additional allowance, &c.

As for the civil assistants, whom you have yourself found deserving an augmentation of their compensation, I intend still to make it the subject of a future communication to you, after having spoken with them upon their situation. I stated, that I consider them as freemen in all possible respects, and that, therefore, the Government has, of course, to treat with them as such. This limits my functions to the ascertaining of their position and wishes, and the communication to you of my opinion in respect to them. They are gentlemen of good feelings, and, therefore, have expressly kept back all application, until the main points contained in my letter of the 27th of March were decided, as has now been done by the Committee on Commerce.

I have the honor to be,

With perfect respect and esteem, honored sir,

Your most obedient servant,

F. R. HASSLER.

Honorable LEVI WOODBURY,

Secretary of the Treasury.

B 4.

TREASURY DEPARTMENT,

July 29, 1836.

SIR: I am pleased to find, by your letter of yesterday, that six full sets of standard weights are now completed. You will be pleased to send one set to be lodged in the department, and the others you will direct as follows: to the collector of the customs, Boston, and a similar direction to Philadelphia, New York, Baltimore, and New Orleans, which are to be sent to the collector of Alexandria, to be forwarded by water to their re-

pective destinations. I will thank you to inform me when they are ready, in order that the collector may be advised of their coming, as well as the necessary instructions respecting the forwarding of them. Proper directions will be given by the department relative to the keeping and proper mode of handling the weights, in accordance with your suggestions. I have only to add upon this subject, that it is confidently expected that the entire number of sets in the custom-houses, as well as those required in the respective States, may be furnished at the earliest day practicable.

In regard to the other subject alluded to in your letter, respecting the work on the survey of the coast, I regret that, in respect to the compensation of yourself and assistants, Congress at its last session passed no law or resolution, as desired by the President and this department.

Those who are well acquainted with the structure and administration of our Government, are well aware that the private letter of a committee—which is all the Committee on Commerce has sent through me to the President, in reference to yourself—or even a public report by them, could be no legal guide, unless sanctioned by a vote of Congress in the usual way. The President having once referred the subject to the decision of Congress, he does not feel authorized to adopt absolutely the views of the committee alone, as expressed in their letter, until the sanction before stated be given by Congress itself; and for that purpose he will cause the subject to be distinctly brought to its notice at the commencement of its next session. In the mean time, he has referred the subject to this department, and, under his and my own views of the case, I feel authorized in adopting the most liberal course which seems justifiable, which is, to direct that conditional allowances should be made for the year 1836, in regard to yourself, fixing your whole expenses at \$3,000, and your entire compensation at \$3,000 more, so as to meet what the committee consider proper; subject, however, to the ratification of Congress at the next session, and leaving your assistants as they now stand, or altering them if preferred, (after you make further inquiry, as suggested in your letter,) so as to accord with my recommendation to the President last spring. If Congress prescribe more or less, then the subsequent settlements must be made conformably thereto; and if it authorize the increase proposed in regard to yourself for the past, or more to the officers and assistants employed under you for the future, it will be paid so soon as authorized. In respect to your compensation for the past or previous years, neither the President nor this department deems it legal to adopt any retrospective measure whatever, extending to former years—under the appropriation for 1836 alone—without an express law to that effect. If Congress pass such a one at the next session, it will afford me pleasure to execute it. I sincerely hope that, as soon as your health may permit, the coast survey will be expedited as fast as the ample means now provided will warrant; and have to regret that any thing should have been omitted to be done since March last, which could have hastened the due progress of the work. Had you advised me that any part of the work was omitted, suspended, or interrupted, since that period, which could have been advanced by my employment of other parties, I should have immediately taken proper steps to secure, if possible, their employment.

If you are not able or willing to proceed with the survey in the manner suggested, and on the terms above stated, until Congress can act on the

whole subject of compensation, it is desirable the department should be apprized of it at the earliest convenient day.

I am, very respectfully,

Your obedient servant,

L. WOODBURY,

Secretary of the Treasury.

F. R. HASSLER, Esq.,

Superintendent of work on Coast Survey, Washington.

B 5.

WASHINGTON CITY, August 15, 1836.

MOST HONORED SIR: The enclosed copy of a letter of Passed Midshipman Page, engaged in the coast survey, shows the state of himself, and that of Messrs. Dahlgren and Jenkins. I cannot do any thing but recommend to you the necessity of an early and favorable consideration and disposition.

I may add, as an example of the impossibility of maintaining that no *special duties* of officers shall be paid, the case now just occurring with Lieutenant Wilkes being sent to London on *special duty*, who certainly cannot nor will be expected to do it without proper allowance for extra expenses, and certainly larger than is requested by the assistants in the coast survey, who stand exactly upon the same footing as he, for the extra expenses which their duty exacts from them.

I have the honor to be,

With perfect respect and esteem, most honored sir,

Your obedient servant,

F. R. HASSLER.

HON. LEVI WOODBURY,

Secretary of the Treasury.

NEW YORK, August 13, 1836.

DEAR SIR: I regret that circumstances, connected with the work in which I am employed, have prevented my earlier attention to the request made in the circular you addressed me. The opinion you ask of me relative to the subject-matter of the circular, as referring particularly to my own case, I can most unhesitatingly give. I am perfectly sensible of the inestimable advantages, in a scientific point of view, to be derived from an association with yourself in the coast survey, and do, consequently, the more regret that I am compelled to pursue that course which necessity alone urges upon me. I find the limited allowance prescribed by Government for that grade of officers in the navy to which I belong, entirely inadequate to meet the expenses imposed upon me by reason of the nature of the work to which I am attached. I shall, consequently, under the present state of affair, be compelled, although much against my anxious wish, to withdraw from the coast survey, so soon as I shall have discharged the obligations imposed upon me by the present season.

I cannot permit myself to withdraw from the work in which I am at present engaged, without expressing the entire gratification I have experienced,

during the whole time of my association with yourself, and also the anxious wish that health and strength may attend you throughout its successful prosecution.

With sentiments of esteem and respect,

Your obedient servant,

TH. J. PAGE,

Passed Midshipman U. S. Navy.

F. R. HASSLER,

Superintendent of the Coast Survey, Washington, D. C.

B 6.

WASHINGTON CITY, August 5, 1836.

MOST HONORED SIR:

1. In your letter of the 2d inst., received this morning, you state that you are not inclined to deviate in any part from your decision, and your opposition to the Committee on Commerce, which you have stated to me in your preceding of the 29th ultimo. As I cannot deviate from my views, and the statements of my last, I am left in the same position as I stated in mine of the 30th ultimo. The extreme of what it is possible for me to do, I have stated there; and even that necessitates sacrifices above what there exists any right to expect from me.

2. We differ so materially in the statement of the most important facts, that it would not be proper for me to push farther, at the present moment, any discussion whatsoever.

3. As to what relates, in your letter, to my assistants, I shall communicate it to them, as I did the former documents, to enable them to judge of the case, if they should choose to act in it.

4. That I and my assistants shall all equally unite in efforts to promote the coast survey, on account of its public utility, as much as you allow us the means to do, you can rely upon, as your letter does, at the same time that it refuses the means to it; but that a cripple cannot perform what a healthful, vigorous man can, is too well known to need stating; that result cannot reach what the honor and the benefit of the country would require, and certainly Congress expects.

5. It is a curious phenomenon, that, while from all the better informed public, of Europe and of this country, equally, I receive almost daily testimonials of the interest and value put in the works in which I am engaged, as well as assistance by communications and expressions of satisfaction, the public department under which it stands should refuse every proper means, and propose every means of destruction.

6. The work of the coast survey has abundance of difficulties in nature, as to bring into a scientific form nature's rough work always has; and the persons intrusted with it should be free from all other difficulties.

7. The difficulties in the administrative part, to which you seem to advert, were only such as arose from the entire unacquaintance of the Navy Department with the nature and exigencies of the work, which refused the most unavoidable expenses. The revocation of all this opposition has ended them.

8. It cannot with propriety be called a difficulty in that sense, (though it is a great one for me and my assistants,) that I have always equally claimed, and still claim, that the compensations shall be placed upon a proper footing, so as to make the work possible, as I have already distinctly stated in my letter of acceptance of the work, under an allowance which I stated positively would prove, and has since proved, entirely insufficient. You cannot but recollect that the first opposition to the proper adjustment of my compensation, at the first outset, arose from your pencil marks upon the first papers, which I handed in to the Treasury Department, under Mr. McLane; which papers being returned to me, to furnish others, are in my possession. I had every reason to expect that, the occasion being given to you to mend it, now, upon experience, you would with pleasure take hold of the opportunity.

9. The proposition to refer the supervision, as you call it, to a board of officers, was an attempt to destroy the coast survey in 1833, which easily exploded before the immediately proved inapplicability, because only intellectual work and exertions can make the coast survey. No council, or consultation, can do any thing else than harm.

10. Difficulties never subdued me in my life, though I can affirm that I have subdued difficulties; therefore, also, that of a few dollars, more or less, in the present year, shall not overweigh me, notwithstanding the stress to which it puts me, and the overvalue which you lay upon it. My means are moral and intellectual; that is, stronger than money and money considerations.

11. I wish, of course, and hope confidently, that the whole of the transactions of these days may be not only laid before the President, but that he may give them an attentive and free consideration; what you may recommend to him on his return, to do freely and unconditionally, for the bettering of the lamentable state of things, may act as so much towards the rescue, and will therefore oblige me.

12. Upon my arrear pay, I cannot but consider my views as correct.

I have the honor to be,

With perfect respect and esteem, most honored sir,

Your obedient servant,

F. R. HASSLER.

Hon. LEVI WOODBURY,

Secretary of the Treasury, Washington City.

B 7.

TREASURY DEPARTMENT,

October 7, 1836.

SIR: Your communication of the 30th ultimo, with its enclosures, has been received. I have submitted them, and all the correspondence I had with you since the adjournment of Congress, to the President. He has been pleased to approve the course pursued by the department, and the various propositions it had the honor to make to you. He intends, as formerly explained, that the whole subject of the coast survey, and weights and measures, with the salaries and allowances claimed, shall at the next session of Congress be submitted to them for revision and detailed directions. In the mean time, he instructs me to state, that until then, as the session is near at hand, he deems it proper, after all which has taken place, that the

subject should continue in its present position; merely confirming, as he does, the changes and additions which have been actually made by this department during his absence. The President trusts that Congress will then take the responsibility and trouble of legislating specially on all the points about which a difference of opinion between you and the President exists, and removing all doubt concerning the amounts Congress would consider reasonable and commensurate with the various services performed, as well as recognising the system of superintendence under which the works are now conducted.

In regard to the request that the time of the midshipmen attached to the land service be allowed as sea service, application to that effect must be made by them to the Secretary of the Navy, and, through him, if desired or necessary, to the President.

I am, very respectfully,

Your obedient servant,

L. WOODBURY,

Secretary of the Treasury.

F. R. HASSLER, Esq.,

West Hills, New York.

B 8

WORCESTER, August 8, 1836.

DEAR SIR: Your letter of the 2d instant I received yesterday. I regret to perceive by it that the Secretary of the Treasury does not conceive that he can adopt the recommendation contained in the letter addressed to him by the Committee on Commerce, to whom the subject was referred by the direction of the President. The reasoning in that letter appears to me perfectly clear, viz: that further legislation is unnecessary, and I cannot conceive in any manner the propriety of referring the matter to Congress; but as it has been done, and the committee, after a full investigation of the subject, have unanimously recommended certain measures to be adopted, it would seem, even if it did not possess the power under the law, to be a sufficient warrant for the Treasury Department to exercise a liberal, or at least a just, policy towards those connected with the great work intrusted to your charge.

You state in your letter that you wish the assistants to express their views each upon his own case, without reference to your own. For myself, I have, nothing more to say than what is already well known to you, viz: that by the letter of the Treasury Department of April 12, 1833, an allowance was made for my services in the coast survey; and by the same letter, the disbursing officer, whom you should select from among the assistants, should be allowed a commission upon his disbursements; both these allowances, as is also known to you, were discontinued in the spring of 1835, by the operation of a provision attached to an appropriation bill of that year. Upon the unjust application of this law, or provision, it is unnecessary to dwell at this time; at some future day I shall endeavor to exhibit my claim to the percentage in such a light, that those who have to judge of the validity of it will be satisfied that I am entitled to it.

It is now between three and four years that I have, in addition to my

duties as an assistant, exercised those of disbursing officer for the coast survey; from my position as such, I have had probably the means of judging as well, or it may be better, than the other assistants, of the extent of means necessary to enable you to carry on your work free from the embarrassing considerations connected with your pecuniary matters. Without showing by a comparison between your present compensation, and that of perhaps a hundred persons engaged in the department of civil engineering, that you are less liberally paid, I will advert to the simple fact, that in 1816, when the expenses of maintaining a family were not much more than half the sum required for the same purpose at the present day, \$5,000 was fixed for your compensation. Upon the renewal of the law, in 1832, for carrying on the survey of the coast, instead of increasing this allowance in a ratio commensurate with the advanced price of living, it was diminished to \$4,500, and, in addition, it was stipulated that you should attend to the construction of standard weights and measures, as well as to the work of the coast survey. However, I conceive that, by the reservation contained in your letter of acceptance, of August, 1832, in reference to the sum fixed for your personal expenses, you have a just claim for an increase of this part of the allowance from the day you entered upon the double duty of superintending the work of the coast survey, and that connected with the construction of the weights and measures. The opinion expressed by the Committee on Commerce in their letter to the Secretary of the Treasury is conclusive, and it certainly is unnecessary for me to attempt to add force to their reasoning.

But to go to the main point: I can testify that your present salary is *inadequate*, and, so far from leaving you free in your movements, that you are often embarrassed for the want of means. It is evident to all that your mind should be at ease in this respect; and certainly, if the Government shall desire all the benefit from the two works which you are charged with, and which the country at large anticipate from your labors, an increase of your compensation must be made; it cannot be expected that you can give to the work your individual attention, while your mind is harassed by reflections consequent upon the embarrassed state of your pecuniary affairs.

In the hope that a favorable decision will be made without further delay,

I remain, with respect and regard,

Yours,

W. H. SWIFT.

F. R. HASSLER, Esq.,

Superintendent of the Survey of the Coast.

NEW YORK, September 4, 1836.

DEAR SIR: In compliance with the request contained in your letter of the 10th of August, I have perused your correspondence with the Secretary of the Treasury, referring to the conduct of the survey, and the compensation of the gentlemen employed in it.

Of my own salary I have heretofore said nothing, not because I considered it adequate, or in agreement either with the nature of the duty or the character of the country; but because your own compensation being in dispute, I thought it better to leave it unembarrassed, or at least disconnected with any interest referring merely to myself. And, in addition to this con-

sideration, which would of itself have decided me not to complain on my own account, there are grievances pressing more directly on the junior officers of the survey, which I thought entitled to redress in preference to my own.

I therefore have not *yet*, and do not *now*, make any application for an increase of pay: at the same time, I am very willing to leave the appreciation of my services to you. The compensation has to me never been an object of *paramount* importance; for if it had been, there are other situations nearly as honorable, and certainly more lucrative, which would have been conferred without any solicitation. It is difficult to speak plainly and without feeling on such subjects.

Allow me, in conclusion, to assure you of my high respect and unfeigned regard. I have been indebted to you for many portions of knowledge which I could (in this country) scarcely have acquired elsewhere. But I am still more your debtor for the frankness and kindness with which your informations have always been conveyed.

I am, dear sir, very respectfully,

Your obedient servant,

J. FERGUSON.

F. R. HASSLER, Esq.,

Superintendent of the Survey of the Coast.

NEW YORK, September 8, 1836.

SIR: In compliance with the request contained in your circular addressed to the assistants in the coast survey, I beg leave to state, that so far as relates to myself, my pay has been insufficient to meet my ordinary expenses; nevertheless, I have been unwilling to make any application for increase of salary, so long as your own was not settled, and the officers of the army and navy employed on shore were still more inadequately paid. The salary, with me, has been but a secondary consideration, or I should have left the work long since. In reference to the report of the Secretary of the Treasury, of the 13th of April last, I would have it understood, that I am unwilling to ask any increase of salary after the remarks there contained, as it is improper that I should measure the little knowledge I possess by the standard of another. I beg you to state to the Secretary of the Treasury, that no advantage will be taken of any knowledge or experience I possess, to "check or retard" the work, by leaving it on account of pay; I shall resign as soon as the work I have in hand is completed, which I trust will be the present season.

The inducement to remain in the coast survey permanently is nothing; I have others to provide for, and the occupation is such, that in a few years I shall be unsuited for any other business; it has already made me poorer in pocket, and I shall profit by what I see before me in your own case.

I feel highly flattered by the compliment paid me by Mr. Woodbury in his report, but others may come in hereafter who may not consider us as having done the "state some service," but as "hirelings" to be turned off when we are useless in their estimation. I prefer being independent, and have made up my mind we had better not ask for office, and consider well before we accept when it is offered.

The knowledge I have gained during the years we have been acquainted I shall always feel grateful for, as it has been of a kind that money would not purchase.

With my best wishes, I remain,

Very respectfully,

Your obedient servant and friend,

EDWARD BLOUNT.

F. R. HASSLER, Esq.

CAMP NEAR SAWPITS.

September 20, 1836.

DEAR SIR: As requested by your circular of last July, I have perused with attention the correspondence between the honorable Secretary of the Treasury and yourself, on the subject of the increase of your salary, and also on your proposition respecting the assistants in the coast survey. I cannot but approve of all you have done and said in these matters, and your rejection of the condition imposed by Mr. Woodbury is no more than what I should have done had I been in your place.

I have heretofore been deterred from addressing you in my case, being unwilling to trouble you whilst I knew you were laboring under difficulties and vexations in endeavoring to get your just claims allowed, and was waiting to hear that every thing relating to yourself was arranged and fixed, when I intended to apply to be restored to the standing, on the score of compensation, originally given me by you, and altered through the misconstruction of your intentions by the ex-Fourth Auditor. You may recollect that I mentioned the subject to you last spring in Washington, and that you then told me to let it rest at that time, for you were going to propose a new organization of the coast survey, which would very probably be adopted by the Secretary into whose charge the coast survey had just been transferred, and prove acceptable to all parties concerned. Upon this, I agreed not to move a step in the case, but trust all to your exertions; well knowing that, from the great interest you take in the coast survey and all those engaged in it, it could not be placed in better hands.

Mr. Woodbury, in his report to the President of 13th April last, is wrong in his statement of the annual salaries received by the assistants, and if he will take the trouble to refer to their accounts, he will see his error. Their compensation is much less than that received by engineers on canals and rail-roads, who perform duties nearly similar, but requiring less information, skill, and experience; and they could all better their pecuniary condition were they desirous of engaging in that line of business. As a case in point, I will mention that I had an offer made me last July, of an engineer's situation on a rail-road in Pennsylvania, at a compensation superior to that received by any assistant on the coast survey, but that I declined it, aware that it would have caused you some embarrassment to supply my place at that time, and of consequence delayed, and perhaps suspended, that part of the work confided to me, which I know you are desirous of having executed as soon as possible.

I cannot, sir, close this communication without making an acknowledgment of the very great obligations I am under for the interest you have always shown in my behalf, and for the very valuable instruction and in-

formation I have received from you, since engaged in the coast survey. Be pleased now, sir, to accept my warmest thanks for the same.

With respect and esteem, I am, your most obedient servant,

C. M. EAKIN.

F. R. HASSLER, Esq.,

Superintendent United States Coast Survey.

HUNTINGDON, LONG ISLAND,

September 25, 1836.

SIR: The circular addressed to your assistants in the coast survey on the 1st of August last, having only been seen by me within a few days, I have not been able before to acknowledge the receipt of it.

The Secretary of the Treasury says, in his letter to you, which accompanies your circular: "In respect to any other officers of the army, their claims for future additional allowances will be considered further, whenever made by any of them," &c.

The law authorizing the coast survey provides for the employment of officers of the army. Among others, now, it appears reasonable that a liberal Government should not place any individual in a situation where he must incur additional expenses, without a corresponding advance upon his salary. You have been so good as to think that I could render service in the survey of the coast, which is a situation both gratifying and instructing to me; but which is one productive of expense, greater than my pay and emoluments in the army can support, as the time during which I have been in the survey has fully demonstrated, and for which I have no other fund to draw upon. If I had another, it would not alter the principle. Comparisons might be made between the situation of an officer of the army or navy engaged in the survey, and that of many civilians engaged in civil constructions, to show the discrepancy between their compensations, much in favor of the civilian. In short, I could not say more, in relation to your own situation, sir, and that of your assistants, than to refer to the well known opinions of one so well informed upon, and competent to judge of, the subject as Colonel Abert.

With my best acknowledgments for the unrestrained instruction which you have always given me, and with the hope that you may enjoy uninterrupted good health and happiness,

I remain, your most obedient and humble servant,

ALEX. D. MACKAY,

Lt. U. S. Army; Act. in Coast Survey.

F. R. HASSLER, Esq.,

Superintendent U. S. Coast Survey, West Hills, Long Island.

U. S. SCHOONER EXPERIMENT,

L. I. Sound, October 2, 1836.

SIR: In reply to your circular of the 1st August, relative to the compensation of the naval assistants upon the coast survey, I would respectfully submit, whether it would not be just that I receive my pay of lieutenant commandant, constantly, while engaged upon the service, and not reduced to that of "lieutenant upon other duty," while engaged copying my work in winter, and subjected to the heavy expense of a residence in Washington.

I beg leave to say, also, in behalf of the gentlemen associated with me,

that their duties are very laborious and responsible ; that their proper performance requires talent not generally met with in the service; and that it is of importance, therefore, that changes should occur among them as seldom as possible. I would suggest, therefore, that they should not be placed on leave of absence, and consequently reduced pay, in winter.

In conclusion, I beg leave to say, that it is of *paramount importance* to us all that this duty should be regarded as equal to sea service to us all.

I am, sir, with the greatest respect and regard,

Your obedient servant,

G. S. BLAKE,

Lieutenant U. S. Navy, and assistant on Coast Survey.

F. R. HASSLER, Esq.,

Superintendent U. S. Coast Survey, &c. West Hills, N. Y.

WEST HILLS, HUNTINGDON TOWNSHIP,
Long Island, Sept. 30, 1836.

MOST HONORED SIR :

Herewith I have the honor to forward to you the letters of the assistants in the coast survey, Captain Swift, Messrs. Ferguson, Blount, Eakin, and Lieut. Mackay, of the army, and Lieut. Blake, of the navy, written in consequence of my circular to them, and your intimation referring to their personal application in relation to their compensations. Their scattered position, and the irregularity of the mails, have occasioned considerable delay in their reception. These letters will prove to you, as I have stated, that they are gentlemen of good feelings. It is therefore not difficult to account for their sensibility, when they found themselves, in your report to the President of 13th of April last, in some measure put up at underbid for their capacity or acquirements. Every one of them could earn, and in fact have been offered, double the amount they get in the coast survey, if money was their only aim, and if they had not the feelings of public spirit and emulation to render themselves more useful to the country, and to be engaged in a work so far superior in its scientific rank as the coast survey is, compared with rail-roads and similar works. They deserve evidently liberal consideration, in a moral point of view, as well as in their pecuniary compensations.

The sums you have mentioned in your report of 13th April, as the present compensations of the assistants, paid by the coast survey funds, being above what they have hitherto received, and as they must be considered as having your approbation, I hope you will find it proper that I take the liberty to request that you will please to direct Captain Swift, as accounting officer, to settle their accounts, at least since the beginning of this year, to the amounts stated by you, making them good the difference upon the parts hitherto received. As these gentlemen have had the delicacy not to mention any specific sums for their compensation, it becomes my duty to supply this, by stating the *minimum* of compensation, which it is not proper to go below, leaving the increase above it to your judgment, and to such other information as you may collect independently of me, viz. :

To Mr. Ferguson	-	-	-	-	\$4,000 annually.
Blount	-	-	-	-	4,000
Eakin	-	-	-	-	3,000
Renard	-	-	-	-	2,000

Whatever other civil assistants are, or may hereafter be appointed, I take the liberty to reserve my opinion, open for communication in proper time.

The midshipmen acting as assistants on land stand evidently in the same predicament as officers of the army. Their situation is stated in my letter to you of 15th August last, accompanying that of Midshipman Page. As it becomes, however, necessary for me here to state the specific sums which, according to my certain knowledge of facts and particulars, it is proper to stipulate as additional allowance, to cover the unavoidable expenses to which the officers, either of army or navy, are subject, when acting on land, I take here again the liberty to state the *minimum* at which these additional allowances could be placed, leaving, as above, the increase to your judgment, &c. Thus, to Lieut. Mackay, or any officer of the army or navy, performing functions as chief of a party, as he does, \$3 per diem for all the time he is engaged in the work.

To the midshipmen Dahlgren, Page, and Jenkins, or any other officer of the army or navy, performing services as assistant to any party on land, \$2 per diem for all the time they are engaged in the work.

As upon the application of Lieut. Blake, commanding the experiment, you have, since my former correspondence with you, authorized him to pay the expenses of the midshipmen employed under him, when on land, and therefore found yourself authorized to make such allowances, as the midshipmen constantly employed on land undoubtedly are in the same predicament, still more onerously so, I take the liberty to request and hope that you will please to direct Captain Swift to pay their expenses for this current year, which can be stated, with full certainty, to be at least \$2 per diem.

It would be improper for me here to omit the repetition of the request formerly made, that the service of naval officers in the coast survey, *on land*, as well as on the water, shall be declared by the President (in whose power it fully stands) as to rank like sea service, in respect to all advancement, promotions, and emoluments. Upon this point all the midshipmen employed are more intent than upon the compensation. It appears in justice due to them; and no reason can exist why a public service, requiring *qualifications superior* to common sea service, should be ranked below it, and thereby, in some measure, attempted to be stamped as a degradation, while it is in fact an elevation of capacity that is required and fostered in this service, which the sea service can never afford, however much it actually stands in need of it.

In relation to the per centage of the accounting officer, additional to his allowance as assistant, I can only repeat here, as well my full conviction of his right to it, upon the letter of the Treasury Department of 12th April, 1833, as that, if put in doubt and brought before Congress, it will be fully allowed; the stipulation being made without any regard to what class, civil, naval, or military, the accounting officer may belong. And I would by the same letter be fully authorized to alter the case instantly, by appointing a civilian as accounting officer, if I should not on better grounds, which I have already sufficiently stated, be fully supported in persisting in my choice.

The inconveniences, delays, and consequent positive losses, occasioned by my losing all right to claim of him such services as would subject him to very considerable travelling expenses, are such (as often stated) that,

upon the score of *economy* alone, I should have thought you would consider yourself fully authorized to make the allowance, at all times.

It is yet proper to state, that the rapid rise in all prices of the necessities of life, and of the common wages, continues augmenting, and makes all consequent increase of compensation not only just, but unavoidable, if the work shall not be abandoned entirely. As a trifling example, I may quote that the colored man whom we had in 1834, as cook in the camp, and occasionally as driver, at \$18 per month, earns now at ease in the city of New York, for the same services, \$30 a month, and could therefore not be hired when he was again called upon lately. However, the whole state of the country, in these respects, is too notorious to need any quotations.

Your earliest favorable decision upon all the above points is very desirable, for the benefit, or rather stoppage of increase of damage, of the coast survey, and will therefore very much oblige me. I have no doubt that, upon your laying before the President the mere naked statement of the facts, he will give his full consent to all.

I have the honor to be, with perfect respect and esteem,

Most honored sir, your obedient servant,

F. R. HASSLER.

The Hon. LEVI WOODBURY,

Secretary of the Treasury, Washington City.

C.

Fifth report of F. R. Hassler, as superintendent of the coast survey, and of the construction of standards of weights and measures, exhibiting the operations performed in 1836.

WEST HILLS, LONG ISLAND,

November 19, 1836.

1. According to the usage of former years, I have the honor here to present, for communication to Congress, a general statement of the progress made since my last report, in the two works of the coast survey, and the construction of standards of weights and measures, committed to my charge. They are now united under the same department, as it is most proper for the nature of the means, as well as for the works they require, and the mutual assistance which they render to one another; thence it is also proper that their progress and state should be presented in the same report.

2. That the whole season has been eminently unfavorable for works in the field, of the nature of the coast survey, must have been so evident to any man observing the weather, that it will naturally be expected that it was greatly impeded by it, and that, like the farmer, who assiduously tills, seeds, and weeds his land, however receives, in reward for all his exertions, only such crops as the favorable and unfavorable chances combine to leave him, so the results of the coast survey works were not commensurate with the exertions made. It has generally been estimated that the time in which the weather admitted the works has not averaged three days in the week for every party during the season.

3. My fourth report of the 22d November, 1835, has stated the works that were in contemplation for this year; they were prosecuted with all the assiduity which the existing circumstances would admit of. The following are the

results obtained, enumerating them from the east to the southwest, in the order of their position.

4. The secondary triangulation made the year before, near the south end of Long Island sound, has been joined to the main triangulation west of it; other secondary triangulations have been filled up from thence, on the whole south coast of Long Island sound, approaching near to New York; the blanks, which the maps with my former reports showed in that part, being supplied.

5. On the part of that shore west of Eaton neck to Oyster bay, topographical surveys were made, in conjunction with the sounding party in the sound, which also connected with the topographical party upon the northern or Connecticut shore, which extended its operations, in continuation of the works of the former year, as far as Mamaroneck, in the state of New York: these latter works being grounded upon the secondary triangulation made in Connecticut the former years.

6. South of New York the secondary triangulations have been completed, and extended to all the necessary details needed to complete the topography, and to give the data for the sounding operations of the bays of Amboy, Newark, and the Raritan river, including Staten island, upon which parts the topography and the soundings are completed.

7. Between these works, the upper part of the bay of New York, the East river, and so much of the North river as it is proper to take up in the work, will be completed next year, by the same respective parties that have been engaged in these works the preceding years.

8. In the rear of these works, to the breadth of the main triangulation, and over the interior of Long Island, the topographical parts will, I hope, be executed next year, as the circumstances of this year prevented the execution of my plans in this respect, which would have required the appointment of a number more of second assistants.

9. South of Navesink, the secondary triangulation has been extended, southerly over New Jersey, to Mount Holly and the outside coast. This work is done in advance of the main triangulation, for which it will assist in pointing out the most favorable stations; thereby abridging, or fully saving, the reconnoitring for the line upon which the main triangulation is to be brought to the valley of the Delaware, as stated in my first plans to be the proper course for it.

10. The station of the main triangulation upon the West Hills has been occupied in the manner stated in my letter of the 30th July last. The observations there required have been made, though under much difficulty, on account of the stormy weather; the heliotropes were for the first time employed, and rendered very good service; the new large instrument has been tried in its use. Though various accessory parts are not as I should wish them, as that will always be the case when the observer who shall use the instrument is not present at the construction of it, (like I had the advantage, before 1816, for the procuring of the general assortment of instruments for the first beginning of the coast survey,) still, what remains to be done from that side, can be done under my special directions, by the mechanic engaged for the coast survey. If the direction of the work remains with me, I shall bring the instrument to perform fully what I intended by it, namely, the task of a portable observatory, to supply the deficiency of a permanent observatory, prohibited by the law of 1832. But it is not proper for me to begin that, before my situation in relation to the work is decided.

11. The preceding shows that the works which could be executed are not all that I had contemplated in my last report, and for which Congress had liberally granted the necessary appropriation. Under the circumstances that occurred, it was, of course, proper that I refrained from arrangements and expenditures, the utility of which was rather prospective, and the necessity less evident, except for me; though I have not refrained from ordering certain objects which would be useful in the country, even independent of the coast survey.

12. A proportionate balance of unexpended appropriation is, therefore, yet on hand; part of it will be consumed next winter, and I hope by the grants that will be made upon your proposition to the persons employed in the work, as claimed in my letters of 27th March and 30th September last, recommended by the Committee on Commerce of Congress to you of 4th July last.

13. For the effect of the delay of the decision upon my letter of the 27th March, which was intended to give an immediate, early, and active start to the coast survey work, and of its ultimate reference to Congress, I take the liberty to refer to my former correspondence. The declining to follow the advice called forth by you of the Committee on Commerce of Congress, has naturally cast a gloom over the whole work, which it is all-important for its progress to remove the quickest possible; besides that, it would have been improper in me, under these circumstances, to exact from assistants, who are either not paid at all, or inadequately so, such services as would force upon them expenditures for which all compensations were refused. But I must not omit to give them here the testimony, and even thanks, that, notwithstanding the discouraging state of things, they have hitherto equally continued to render every service that I requested, with the utmost liberality and cheerfulness. As they know that, of all, I in fact was the greatest sufferer, they recompensed my perseverance by their own.

14. It is of the utmost importance for the future progress of the work, that you would please to call forth, in any way judged best for success, the earliest possible decision upon every point put in question and referred by you to Congress, namely: the full of the items of my letter of 27th March last; the confirmation of the conditional allowances made by your letter of 10th August, and those of my letter of 30th September last. The services of the clerk, mechanic, artificer, &c., are required all winter, and your conditional decision being possible to be construed as referring only to the year 1836, their services would be interrupted, or perhaps lost for the future, if not assured before. In general, the favorable and early decision of the whole, which I have no doubt you will recommend in the best manner possible, is absolutely necessary to enable me to take adequate measures for the next year's campaign, as these must always be taken the earliest possible in the preceding winter, as I represented already last winter. With the view to accelerate the decision of Congress, I have caused 500 copies of all the documents since last year to be printed, that they may immediately be distributed, to save the loss of time in printing them by order of Congress, as would probably be required.

15. The elements for determining the appropriation to be proposed to Congress at its next session lie already in my report of last year; as the plan of next year must be to fill up the whole of what I had then proposed for this year, and, in addition to it, as much as possible, the topographical works within the parts of the secondary triangulation added this year. It is, evi-

dently, indispensable also to continue the main triangulation with that activity for which the means are now provided. This would require an appropriation of \$50,000 or \$60,000, in addition to the balance in hand from the appropriation of last year. Some heavier expenditures will naturally fall in next year, which I did not deem proper to order this year; the proportionate estimates are easily inferred from my last report.

16. As the works of this year are in detached parts, distributed in different parts, within and outside of the sketches presented with my two former reports, no geometric sketches are herewith presented; they would require either a number of detached maps, which would have no interest, or one of too much bulk, which would contain also all the former works already presented. Besides that, some of the parties having just now left the field, and others being still engaged, there cannot, as yet, be time to make such sketches.

17. In a general point of view, it must be here observed, that improper advantage might be taken of such communications, if printed as documents of Congress, to transform them into a disgraceful plagiarism of our work, which would forestall the public patronage in an undue and unmerited manner, to the great detriment of the proper future publications, which will, undoubtedly, be made by the Government, whose positive property the results of the coast survey are. In proper time, I should take the liberty to propose a properly calculated and adequate plan to make such publications in that creditable manner, which alone can prevent disgrace. Even the granting of extracts from our work, for the advantage of special localities, must be done with precaution.

18. The attention bestowed by Congress to the establishment of uniform standards of weights and measures for distribution to all the States and Territories, by the resolution of June 14th, 1836, makes it proper that I should here render an account of that establishment, which your liberal support has enabled me to carry on prosperously and uninterruptedly; besides that, it is a gratification to me to render account of the whole of the works under my charge in full connexion.

19. In that work, all the means for its execution were to be created; the building which had been previously erected in the arsenal yard, at the expense of the Treasury Department, was first taken advantage of, and the pure zinc required for the composition of good pure brass, was made there out of ores procured from Pennsylvania, New Jersey, and Maryland, of which a quantity was reduced sufficient for the purpose of our consumption; this being the first establishment in this line of industry ever attempted successfully in this country, and which was necessary on account of the impure quality of the zinc imported under the name of spelter.

20. The casting operations for the standards were at first carried on at the same place, to abridge the building, and unite what required fire and furnaces, though it was not conveniently situated for the communication with the mechanical part of the establishment. But when the zinc establishment had fulfilled its task, and was discontinued, it became an object of economy to ease and shorten the communication between the casting and the working; therefore a casting shop was established near the office establishment on Capitol hill, in great part out of the materials of the establishment given up; this was, of course, now made fully appropriate to its aim; and the progress of the work, and all its economical arrangements, have been very much promoted by it.

21. The field work of the coast survey, last summer, having been princi-

pally works of the assistants, the winter work of the office will also principally be the calculating and plotting of these works, in which my personal share consists more in directing, though I have a sufficiently large task in the preparations for the calculations and reductions of the main triangulation, and the general system of the work, in scientific respects. I shall, therefore, be able to attend to the final standarding of weights and yards, of which a considerable number are in readiness for this final operation. Thereby I hope to be able to answer in due time the anxiety manifested in several States to receive these standards, and, besides, those for the more important custom-houses; so that regard might be paid, at the time of their distribution, to their greater or less utility in those different places.

22. In respect to the order in which these works can be most advantageously, and must by their nature be executed, I may here take the liberty to observe, that it must unavoidably follow the natural order of the works required for their construction, as well in the kind as in the time required, for each kind of standards. Thus the weights are the first that can be delivered; the yards, or length measures, next; and the capacity measures afterwards, as these require a much greater combination of means and workmanship, and, in their ultimate comparison, are under so many influences that are to be taken into consideration, and minutely calculated, that they consume, unavoidably, a considerable time. I continue, of course, also to increase the means for acceleration, in proportion as they become necessary in the course of the work.

23. The six sets of weights, which I had the satisfaction to deliver to the Treasury Department, and which obtained your approbation, have shown the manner in which all the work will be executed. Of the yards, the sample which has been in the Treasury Department has given an idea, though it was proper to keep it back as yet from delivery, for the use of the office, in approximating the other yards; a sufficient number will be delivered in proper time.

24. It would be very proper to put this establishment, in some measure, in connexion with the works of a similar kind which have been for some time established, and others in the course of being established, by all the European Governments; by the mutual exchange, which I have taken the liberty to propose to you, by means of an initiative proposition, of this mutual exchange of standards, to be made to the legations from abroad in this country; by this means, also, the comparisons and reductions needed for the use of the custom-houses, in the foreign commerce, could be put into a regular legal form. Such a collection would be of great interest and utility.

25. This mutual exchange would be the most authentic, and also the cheapest, means to that aim. It is not required, in that case, to communicate full sets of standards, as they are made for the custom-houses and the States; only the primitive units are communicated, as are, in our case, the pounds troy and avoirdupois, the yard, and the gallon. These, taken from the general mass of work to be done at all events, bear such a small proportion to it, as not to be of much consideration.

26. Finally, I must take the liberty to state, that the bad state of my health, which has been produced solely by the too long protracted distress and disagreements of my situation, while I was straining all my exertions for the proper success and advancement of the works under my charge, has not been suffered to influence the results of my work more than what nature absolutely refused to yield. I have worked in sick days and in well days,

always to the full extent of possibility. I wish it may be for the benefit of the good aim which I intended.

Allow me to hope that your propositions to Congress will fully conform to what I have been obliged to state as indispensable, and that you will strongly recommend the full grant of them, so that I may be enabled to continue again my task, with that vigor and energy which I have always intended, and which I have formerly bestowed upon it.

F. R. HASSLER.

HON. LEVI WOODBURY,

Secretary of the Treasury, Washington City.